NORTHWESTERN
- CONCRETE -
MACHINERY

DEALER'S PRICE LIST

"Northwestern" Concrete Machinery

AUTOMATIC ADJUSTABLE BLOCK MACHINE

Page	No.		Retail	Dealer
3-4-5	1	Outfit No. 1	$115.00	$ 90.00
"	2	Outfit No. 2	125.00	100.00
"	3	Outfit No. 3	250.00	175.00
"	4	Face Plate—Any Design	6.00	3.00
"	5	Water Table Face Plate	6.00	3.00
"	6	Return End Doors—Any Design	3.00	1.50
"	7	Silo Block Attachment	30.00	18.00
"	8	Chimney and Pier Attachment	20.00	12.00
"	9	Angle Plate Attachment	15.00	9.00
"	10	Veneer Attachment	15.00	8.25
"	11	Extra Flask Attachment (Prices on Application)		

LEADER BLOCK MACHINE

6-7	12	Size 8x8x16	30.00	13.50
"	13	Size 8x10x16	35.00	18.00
"	14	Size 8x12x16	40.00	22.00
"	15	Extra Flasks 8x8x16	10.00	4.00
"	16	Extra Flasks 8x10x16	15.00	4.25
"	17	Extra Flasks 8x12x16 (Either Single or Double Core)	20.00	5.25
"	18	Face Plates—Any Design	3.00	1.30
"	19	Bay Window Attachment, 8x8x16	6.00	2.60
"	20	Bay Window Attachment, 8x10x16	6.00	2.90
"	21	Bay Window Attachment, 8x12x16	6.00	3.50
"	22	Circle Block Attachment, 8x8x16	6.00	2.80
"	23	Circle Block Attachment 8x10x16	6.00	3.50
"	24	Circle Block Attachment, 8x12x16	6.00	4.00
"	25	4-Inch Course Block Attachment, 8x8x16	12.00	4.75
"	26	4-Inch Course Block Attachment, 8x10x16	12.00	5.00
"	27	4-Inch Course Block Attachment, 8x12x16	12.00	5.25
"	28	Silo Block Attachment	15.00	7.25
"	29	Return End Doors—Any Design	1.30	.65
"	30	Water Table Face Plates	3.00	1.30
"	31	Inside Corner Face Plates	3.00	1.30

IMPROVED BLOCK MACHINE

8-9	32	Size 8x8x16	50.00	33.00
"	33	Size 8x10x16	55.00	37.00
"	34	Size 8x12x16	60.00	41.00
"	35	Extra Flasks, 8x8x16	15.00	6.25
"	36	Extra Flasks, 8x10x16	20.00	6.75
"	37	Extra Flasks, 8x12x16	25.00	7.75
"	38	Face Plates—Any Design	3.00	1.50
"	39	Bay Window Attachment, 8x8x16	6.00	3.60
"	40	Bay Window Attachment, 8x10x16	6.00	3.90
"	41	Bay Window Attachment, 8x12x16	6.00	4.50

IMPROVED BLOCK MACHINE (Continued)

Page	No.		Retail	Dealer
8-9	42	Circle Block Attachment, 8x8x16	6.00	3.80
"	43	Circle Block Attachment, 8x10x16	6.00	4.50
"	44	Circle Block Attachment, 8x12x16	6.00	5.00
"	45	4-Inch Course Block Attachment, 8x8x16	12.00	6.00
"	46	4-Inch Course Block Attachment, 8x10x16	12.00	6.25
"	47	4-Inch Course Block Attachment, 8x12x16	12.00	6.75
"	48	Silo Block Attachment	15.00	10.00
"	49	Inside Corner Face Plates	3.00	1.50
"	50	Water Table Face Plates	3.00	1.50
"	51	Return End Doors	1.50	.75

STANDARD BLOCK MACHINE

10	52	Size 8x8x24	50.00	30.00
"	53	Size 8x9x24	51.00	31.50
"	54	Size 8x10x24	53.00	33.00
"	55	Size 8x12x24	56.00	36.00
"	56	Size 8x16x24	60.00	40.00
"	57	Complete Outfit	85.00	75.00
"	58	Face Plates—Any Design	6.00	3.00
"	59	Inside Corner Face Plates	6.00	3.00
"	60	Water Table Face Plates	6.00	3.00
"	61	Return End Doors—Any Design	3.00	1.50
"	62	Veneer Attachment	15.00	8.25
"	63	Chimney and Pier Attachment	18.00	12.00
"	64	Silo Attachment	30.00	15.00
"	65	Extra Flasks (Prices on Application)		

HANDY BLOCK MACHINE

11	66	Unmounted, Size 8x9x16	20.00	10.00
"	67	Mounted, Size 8x9x16	25.00	12.50
"	68	Silo Attachment	15.00	10.00
"	69	Combination for making both Oblong and Silo Blocks Unmounted	25.00	18.00
"	70	Face Plates—Any Design	3.00	1.30
"	71	Return End Doors—Any Design	1.50	.65

SILO BLOCK MACHINE

12-13	72	Unmounted, Size 8x9x16	20.00	10.00
"	73	Mounted, Size 8x9x16	25.00	14.50
"	74	Extra Face Plates	3.00	1.30
"	75	Combination for making both Silo and Oblong Blocks, Mounted,	35.00	22.00

TEN BRICK MACHINE

14-15	76	With Fancy Face Plate Attachment	75.00	47.00
"	77	Ornamental Face Plates	.50	.40
"	78	Ornamental End Plates	.50	.35

AVERY LIBRARY
COLUMBIA UNIVERSITY
AVERY LIBRARY
COLUMBIA UNIVERSITY

SIX BRICK MACHINE

Page	No.		Retail	Dealer
16	79	Complete	30.00	18.50
"	80	Ornamental Face Plates	.50	.40
"	81	Ornamental End Plates	.50	.35

SIDEWALK TILE MACHINE

17	82	Machine without Mould	40.00	22.00
"	83	Square Moulds, 6 Inch	12.00	9.00
"	84	Square Moulds, 8 Inch	13.00	10.00
"	85	Square Moulds, 9 Inch	13.00	10.00
"	86	Square Moulds, 10 Inch	14.00	11.00
"	87	Square Moulds, 12 Inch	14.00	11.00
"	88	Square Moulds, 14 Inch	15.00	12.00
"	89	Square Moulds, 16 Inch	15.00	12.00
"	90	Square Moulds, 18 Inch	16.00	13.00
"	91	Square Moulds, 20 Inch	17.00	14.00
"	92	Square Moulds, 24 Inch	20.00	17.00
"	93	Hexagon Moulds, 6 Inch	16.00	13.00
"	94	Hexagon Moulds, 8 Inch	17.00	14.00
"	95	Hexagon Moulds, 9 Inch	17.00	14.00
"	96	Hexagon Moulds, 10 Inch	18.00	15.00
"	97	Hexagon Moulds, 12 Inch	20.00	17.00
"	98	Hexagon Moulds, 14 Inch	21.00	18.00
"	99	Hexagon Moulds, 16 Inch	21.00	18.00
"	100	Hexagon Moulds, 18 Inch	22.00	19.00
"	101	Hexagon Moulds, 20 Inch	23.00	20.00
"	102	Hexagon Moulds, 24 Inch	28.00	24.00

CONTINUOUS MIXER

ON SKIDS

18-19	103	Without Power, with Sand and Cement Hopper	300.00	$270.00
"	104	Without Power, with Sand and Cement and Stone Hopper	350.00	315.00
"	105	With Power, with Sand and Cement Hopper	450.00	405.00
"	106	With Power, with Sand and Cement and Stone Hopper	500.00	450.00

ON WHEELS

"	107	Without Power, with Sand and Cement Hopper	350.00	315.00
"	108	Without Power, with Sand and Cement and Stone Hopper	400.00	360.00
"	109	With Power, with Sand and Cement Hopper	550.00	495.00
"	110	With Power, with Sand and Cement and Stone Hopper	600.00	540.00

HAND MIXER

20	111	Complete	45.00	22.00

POWER MIXER

21	112	Without Engine	85.00	50.00
"	113	With 3 HP Engine	175.00	130.00
"	114	Engine & Mixer mounted on Separate Low Trucks	210.00	155.00

2-PIECE DRAIN AND SEWER TILE MOULDS

22	115	Size 6 Inch	12.00	6.25
"	116	Size 8 Inch	13.00	7.25
"	117	Size 10 Inch	14.00	8.25
"	118	Size 12 Inch	15.00	9.75
"	119	Size 14 Inch	17.00	12.00

EXPANSION DRAIN & SEWER TILE MOULDS

23	120	Size 4 Inch	20.00	13.60
"	121	Size 5 Inch	21.00	14.45
"	122	Size 6 Inch	21.00	14.45

EXPANSION DRAIN & SEWER TILE MOULDS

Page	No.		Retail	Dealer
23	123	Size 8 Inch	22.00	15.60
"	124	Size 9 Inch	23.00	16.57
"	125	Size 10 Inch	24.00	17.00
"	126	Size 12 Inch	26.00	18.70
"	127	Size 14 Inch	29.00	21.25
"	128	Size 15 Inch	29.00	21.25
"	129	Size 16 Inch	31.00	22.95
"	130	Size 18 Inch	31.00	22.95
"	131	Size 20 Inch	34.00	25.50
"	132	Size 24 Inch	39.00	29.75
"	133	Size 26 Inch	44.00	34.00
"	134	Size 30 Inch	49.00	38.25
"	135	Size 36 Inch	54.90	42.50
"	136	Size 42 Inch	60.00	51.00
"	137	Size 48 Inch	70.00	60.00
"	138	Size 60 Inch	90.00	83.00

BELL END ATTACHMENT

24	139	Size 4 Inch	1.75	.75	1.31	.56
"	140	Size 5 Inch	2.00	.75	1.50	.56
"	141	Size 6 Inch	2.00	.75	1.50	.56
"	142	Size 8 Inch	2.50	.75	1.87	.56
"	143	Size 9 Inch	3.00	.75	2.25	.56
"	144	Size 10 Inch	3.00	.75	2.25	.56
"	145	Size 12 Inch	3.00	.95	2.70	.85
"	146	Size 14 Inch	4.00	1.10	3.60	.99
"	147	Size 15 Inch	4.00	1.10	3.60	.99
"	148	Size 16 Inch	4.50	1.25	4.05	1.12
"	149	Size 18 Inch	4.50	1.25	4.05	1.12
"	150	Size 20 Inch	5.00	1.35	4.50	1.21
"	151	Size 24 Inch	6.00	1.65	5.40	1.48
"	152	Size 26 Inch	7.00	2.00	6.30	1.80
"	153	Size 30 Inch	7.50	3.50	6.75	3.15
"	154	Size 36 Inch	9.00	4.50	8.10	4.05

BELL & TONGUE ATTACHMENTS

24	155	Size 4 Inch	.80	.50	.60	.37
"	156	Size 5 Inch	.80	.50	.60	.37
"	157	Size 6 Inch	.80	.50	.60	.37
"	158	Size 8 Inch	.80	.50	.60	.37
"	159	Size 9 Inch	.85	.55	.64	.41
"	160	Size 10 Inch	.90	.60	.67	.45
"	161	Size 12 Inch	.95	.65	.85	.59
"	162	Size 14 Inch	1.00	.75	.90	.67
"	163	Size 15 Inch	1.05	.80	.94	.72
"	164	Size 16 Inch	1.10	.85	.99	.76
"	165	Size 18 Inch	1.20	.90	1.08	.81
"	166	Size 20 Inch	1.30	1.00	1.17	.90
"	167	Size 24 Inch	1.50	1.15	1.35	1.03
"	168	Size 26 Inch	2.00	1.50	1.80	1.35
"	169	Size 30 Inch	2.25	1.90	2.02	1.71
"	170	Size 36 Inch	2.90	2.55	2.61	2.29

ONE MAN FENCE POST MACHINE

25-26	171	Adjustable Mould complete	$22.00	$12.00

WELL CURBING MOULDS

26	172	Diameter 3 Ft.	10.00	4.50
"	173	Diameter 4 Ft.	11.00	5.00
"	174	Diameter 6 Ft.	12.00	5.25
"	175	Diameter 8 Ft.	13.00	5.50
"	176	Diameter 10 Ft.	14.00	6.00
"	177	Diameter 12 Ft.	15.00	7.00

PIER & CHIMNEY MOULDS

27	178	Size 14x14x8—Any Design	8.00	5.25
"	179	Size 16x16x8—Any Design	9.00	5.50
"	180	Size 16x24x8—Any Design	10.00	6.75
"	181	Size 20x24x8—Any Design	12.00	8.25

SILL AND CAP MOULD

Page	No.		Retail	Dealer
28-29	182	Complete Mould	25.00	11.50
	183	Face Plates—Any Design ..	10.00	4.75
"	184	Egg and Dart Coping.....	15.00	7.75
"	185	Two Return Ends for Egg and Dart Coping	10.00	5.75

PORCH COLUMN & BALUSTER OUTFIT

30-31	186	Complete Outfit, Either Design, 10 Inch.....	65.00	51.00
"	187	Complete Outfit, Either Design, 12 Inch	75.00	57.00
"	188	Capital Mould, Either Design, 10 Inch	11.50	8.25
"	189	Capital Mould, Either Design, 12 Inch	13.00	9.75
"	190	Combination Column Mould 10 Inch	13.00	9.75
"	191	Combination Mould 12 Inch	14.50	10.25
"	192	Pier Cap Mould—Either Design, 10 Inch	9.50	5.25
"	193	Pier Cap Mould—Either Design, 12 Inch	10.50	5.25
"	194	Column Base Mould 10 Inch	6.00	4.00
"	195	Column Base Mould 12 Inch	8.00	5.00
30-31	196	Pier Body Mould—Any Design, 10 Inch	8.00	5.25
"	197	Pier Body Mould—Any Design, 12 Inch	9.00	5.50
"	198	Pier Base Mould, 10 Inch ..	9.75	6.60
"	199	Pier Base Mould 12 Inch ..	11.00	7.75
"	200	Top Railing Mould—Either Design	8.00	5.00
"	201	Bottom Railing Mould	8.00	5.00
"	202	Baluster Mould—Bell Design	5.00	2.00
"	203	Baluster Pallets	3.00	1.00

SPECIAL RAILING MOULDS

30-31	204	Curved Top Rail—Either Design for 16 Ft. Diameter	10.00	8.00
"	205	Curved Bottom Rail for 16 Ft. Diameter	10.00	8.00
36	206	Straight Rail Mould for Balusters 4 to 6 Ft.	10.00	6.37

5-PIECE PORCH COLUMN & PIER OUTFIT

32	207	Complete Outfit, 10 Inch....	30.00	19.00
"	208	Complete Outfit, 12 Inch ..	35.00	24.00
"	209	Column Mould, 12 Inch high, 10 Inch	6.00	3.75
"	210	Column Mould, 12 Inches high, 12 Inch	9.00	5.50
"	211	Pier Mould—Any Design 10 Inch	8.00	5.25
"	212	Pier Mould—Any Design 12 Inch	9.00	5.50
"	213	Column Base Mould 10 Inch	6.00	4.00
"	214	Column Base Mould 12 Inch	8.00	.500
"	215	Ring Mould 10 Inch.....	5.00	2.25
"	216	Ring Mould 12 Inch	7.00	3.00

BALL MOULDS

32	217	Fancy Ball 12 Inch	8.50	5.50
"	218	Fancy Ball 14 Inch	9.50	6.00
33	219	Plain Ball 2½ Inch	3.00	2.55
"	220	Plain Ball 3½ Inch	4.00	3.50
"	221	Plain Ball 6 Inch	10.00	8.50
"	222	Plain Ball 7 Inch	10.00	8.50
"	223	Plain Ball 8 Inch	10.00	8.50

BALL MOULDS, (Continued)

Page	No.		Retail	Dealer
33	224	Plain Ball 9 Inch	12.50	10.62
"	225	Plain Ball 10 Inch	15.00	12.75
"	226	Plain Ball 12 Inch	17.00	14.45
"	227	Plain Ball 15 Inch	20.00	17.00
"	228	Plain Ball 16 Inch	20.00	17.00
"	229	Plain Ball 18 Inch	20.00	17.00

SEPARATE COLUMN MOULDS

33	230	Renaissance—Either Design 8 Inch	35.00	29.75
"	231	Renaissance—Either Design, 10 Inch	40.00	34.00
"	232	Renaissance—Either Design, 12 Inch	45.00	38.25
"	233	Empire Mould 11 Inch	35.00	29.75
"	234	Empire Mould 18 Inch	75.00	63.75
34	235	Grecian Mould 10 Inch	50.00	25.50
"	236	Doric Mould 13¼ Inch	50.00	42.50

LAWN VASES

35-36	237	Grotesque Design	30.00	25.50
"	238	Depressed Panel Design	30.00	25.50
"	239	Vase alone	20.00	17.00
"	240	Base alone	11.00	9.00

SEPARATE BALUSTER MOULDS

35	241	Square Fluted "Egg and Dart" 14 Inch	7.50	6.37
"	242	Square Fluted "Egg and Dart" 20 Inch	15.00	12.75
"	243	Square Fluted "Egg and Dart" 24 Inch	17.50	14.87
"	244	Fancy Round 18 Inch	10.00	8.50
"	245	Square Fluted "Heart Leaf" 18 Inch	10.00	8.50
"	246	Plain Round 14 Inch	7.50	6.37
"	247	Plain Round 16 Inch	10.00	8.50
"	248	Plain Round 18 Inch	10.00	8.50
"	249	Plain Round 24 Inch	15.00	12.75
"	250	Plain Round 30 Inch	20.00	17.00

ROMAN POST CAP MOULD

35	251	Complete Mould	30.00	25.50

GRAVE STONE MOULDS

36	252	24 Inch Headstone Base 18x24	60.00	36.00
36	253	22 Inch Headstone Base 18x24	50.00	30.00
36	254	86 Inch Headstone Base 36x20	110.00	66.00
"	255	66 Inch Headstone Base 30x30	105.00	63.00
37	256	84 Inch Obelisk Base 36x36	115.00	69.00
"	257	42 Inch Obelisk Base 36x36	57.50	34.50

BURIAL VAULT MOULD

38	258	Complete Adjustable Mould..	125.00	112.50

GRAVE MARKERS

38	259	Complete Mould 24 Inch high	12.00	7.20

CONCRETE BLOCK CARS

39	260	Car without upper decks....	20.00	11.50
"	261	Car with one upper deck....	23.00	14.50
"	262	Car with two upper deck....	27.00	17.50
"	263	Intermediate Slats	1.00	.55

(The above prices do not include intermediate Slats).

CINDER CRUSHER

39	264	Complete Cinder Crusher without Belt	125.00	75.00

GASOLINE ENGINES

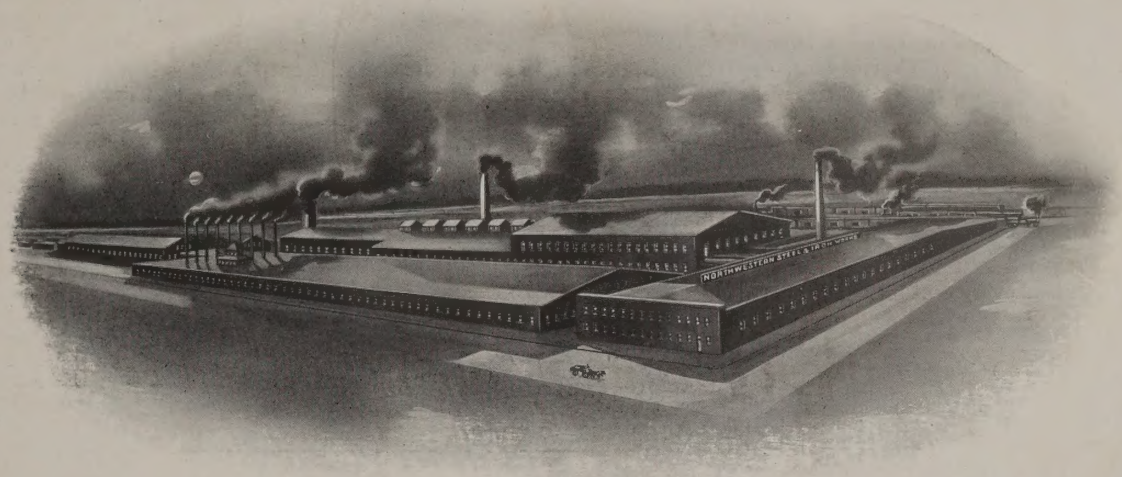
40	265	Prices and catalog on application.		

AVERY LIBRARY
COLUMBIA UNIVERSITY

78283

THE LARGEST FACTORY IN EXISTENCE

DEVOTED TO THE MANUFACTURE OF CONCRETE MACHINERY



HOME OF NORTHWESTERN CONCRETE MACHINERY

THIS illustration gives a view of the plant of the Northwestern Steel and Iron Works and is the largest factory of the kind making a specialty of manufacturing concrete machinery. It covers a floor space of over 60,000 square feet and is equipped with the most modern and up-to-date machinery that money can buy. This plant is constructed particularly to build concrete machinery. We operate our own cast iron and brass foundries, machine shops, forge shops, pattern shop and grinding rooms. Our workmen are experts in the concrete machinery line. We mix our own cast iron especially for this class of work and have pattern makers and carvers who make nothing but concrete machinery, patterns, plates and moulds. There are but few factories properly equipped with special machinery for turning out such work in large quantities and at a minimum cost, as it requires a special grade of iron and special machinery to turn out such work successfully.

We are Concrete Machinery Specialists

We have built concrete machinery for years and the quality and efficiency of our machines and moulds is recognized everywhere. Besides the "Northwestern" line we make the entire lines of several other concrete concerns, being able to make these goods of a better quality and at a lower price than other plants not so well equipped. We shall be pleased at any time to negotiate for the manufacture of anything in our line, and solicit consideration of the machines and moulds illustrated herein.

We issue a special ornamental face plate book in connection with this catalog which is sent free on request.

Northwestern Steel and Iron Works

EAU CLAIRE :: WISCONSIN

Classics
AT
1250
N819
1900

AVERY LIBRARY
COLUMBIA UNIVERSITY

To the Trade in General

OUR machines and moulds are put on the market only after long test and careful supervision in the manufacture and assembling. We carry the most complete line of concrete machinery ever manufactured. We have 6,000 patterns and distribute thousands of machines and moulds each month. Every machine or mould is carefully inspected and tested before leaving the factory. Nothing is left undone to make satisfied customers, because satisfaction means more business and we don't take any chances. You get what you order and if it is not in stock, we do not substitute. Every machine or mould is fully guaranteed. Every shipment is carefully followed up to insure prompt delivery. Any defect is promptly adjusted and every precaution taken to serve the individual's requirements. We recommend such machines or moulds as will best serve the purpose. We don't force on any one something for which he has no use. We want satisfaction first and orders will come as a result. This has been our policy and will continue to be.

In dealing direct with the factory you have a decided advantage, you buy your goods at factory cost and at so much per pound. Broken parts can be replaced promptly and shipments made the same day as order is received. We maintain an Information Bureau which is open to all of our customers. There are ideas, moulds and machines continually being made some of which might be peculiarly suited to your requirements. Our Information Bureau is to keep you posted.

The following pages describe the principal machines and moulds in use and in addition to this we issue a special catalog on ornamental moulds and face plates, designs, etc. Our machines will do everything which we claim they will do and many things which lack of space necessitates leaving out. They are guaranteed in the minutest part of construction and if they are not just as represented we cheerfully refund every cent including the freight.

To the Beginner and Man of Limited Means

Introducing a Few Thoughts on Success and How to Start

There is a natural law that prevents a man from eating more than he can hold. Fortunately, there is no law from preventing a man from having more money than he knows how to use. You may be poor or rich with ten dollars – rich if you turn that ten dollars into more money, or poor if you sit and envy the man who does. **Get out and hustle** is the secret of "making good" whether with much or little money to start with. Ability is like muscle—the more you train them the better they work.

The greatest American electrical genus began by selling papers on a railroad train. The greatest drygoods man began by selling shoe strings on the street. The greatest railroad man in the world used to run errands on Wall Street. The richest man in the world began by hiring another boy to do for 50 cents what he himself was paid $1.00 to do. Don't think life is a steam roller and that you must lie down and let it roll you flat. The greatest men are those who come up from the ranks.

There is one line of work which opens opportunities for all. We refer to the making of concrete. Whether you make blocks, or buildings, or sidewalks, or bricks, or ornamental designs you have the whole world before you and with opportunities which have never knocked at the door of any of your ancestors. Politics don't effect this line. Trusts don't control any of its arteries. The only party of which you are a part is the party who pays for the job—your customer.

Concrete is an enormous industry and still in its infancy. And one of the most attractive features of this business is the fact that it requires but very little capital to start with and offers untold opportunities to everyone and in every town, district or state. Concrete products are in use in practically every city, town, village and country district in United States and in practically every part of the world. We are willing to do everything in our power to assist in furnishing information as to making of good concrete articles and do everything possible in the way of low prices and terms. We issue special literature on mixing of concrete, making blocks, how to build porches, designs for houses, how to build sidewalks and many interesting and useful hints on Concrete Manufacture.

OUR GUARANTEE

We positively and fully guarantee all of our machines and moulds for one year. Any breakage due to a flaw in the material or poor workmanship will be replaced free of charge and freight paid. We guarantee that our machines and moulds are just as represented and money promptly refunded if the goods are not just as described and illustrated.

Terms

Remittances should be made in Bank Drafts, Checks, Money or Express Orders. Goods sent C. O. D. must have 25 per cent. remittance with the order;sight draft for balance sent with bill of lading attached.

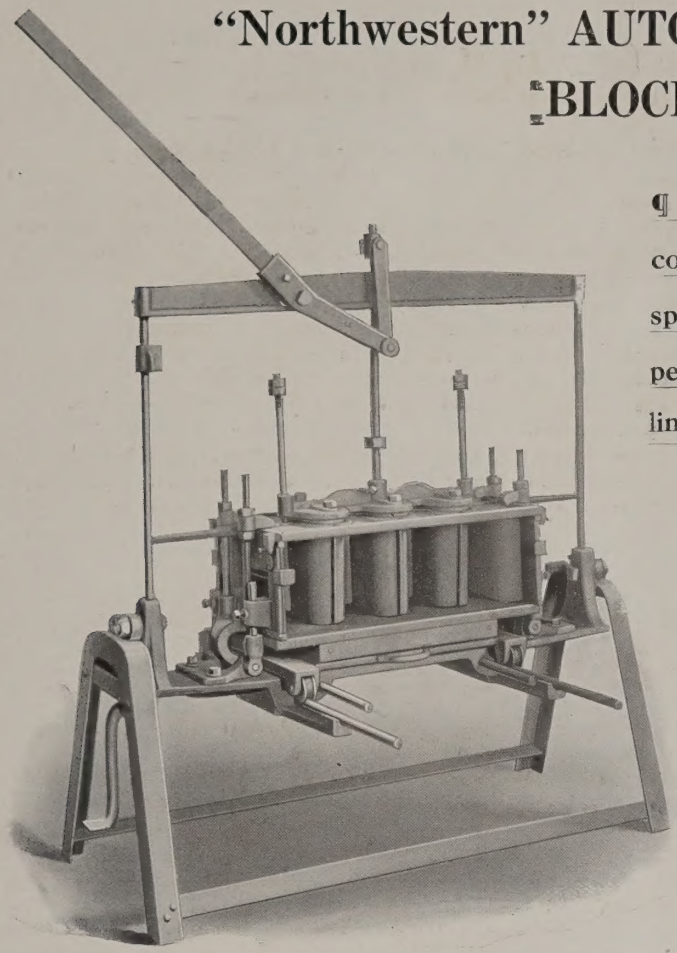
Cash must accompany the order unless arrangements are made otherwise. Special terms will be made to persons having satisfactory rating or by note signed by responsible parties.

We respectfully submit the following pages and solicit your friendly consideration.

NORTHWESTERN STEEL AND IRON WORKS

EAU CLAIRE :: WISCONSIN

"Northwestern" AUTOMATIC ADJUSTABLE BLOCK MACHINE



The Most Automatic and Adjustable Machine Made

¶ There is not another machine made that will come up to it in variety of size or shape blocks, speed in operation, saving in material, output per day, quickness in adjustment, ease of handling, or quickness and ease of removing the block

KIEL, WIS.

GENTLEMEN :

I am sending you a photograph showing the St. Nazianz Bank Building which I made last summer with the "Northwestern" Adjustable Block Machine which I purchased last August and I wish to say that it gives more than satisfaction. I find the blocks can be made faster with less labor than on any other machine, and in handiness of operation and durability it has no equal.

I am giving you my order for your Sill and Cap Mould as no blocking making plant is complete without that.

I will also purchase your Ten Brick Machine some time during the summer.

Yours truly,

(Signed) ANTON MILLER.

MAKES ALL THE FOLLOWING SIZE BLOCKS

OBLONG BLOCKS

Lengths				Width	Height
24 inch	18 inch	12 inch	6 inch	8 inch	6 inch
24 "	18 "	12 "	6 "	12 "	6 "
24 "	18 "	12 "	6 "	16 "	6 "

Plain or Rock Face Plates for above sizes

24 inch	18 inch	12 inch	6 inch	8 inch	8 inch
24 "	18 "	12 "	6 "	9 "	8 "
24 "	18 "	12 "	6 "	10 "	8 "
24 "	18 "	12 "	6 "	12 "	8 "
24 "	18 "	12 "	6 "	16 "	8 "

Plain, Rock, Border Rock, Panel, Rope, Whirlwind Scroll, Tool Face, and six designs of Broken Ashler Face Plates for above sizes.

VENEER BLOCKS—MAKES TWO AT A TIME

Length	Width	Height
24 inch	4 inch	6 inch
24 "	6 "	6 "
24 "	8 "	6 "

Plain or Rock Face Plates for above sizes.

24 inch	4 inch	8 inch
24 "	4½ "	8 "
24 "	5 "	8 "
24 "	6 "	8 "
24 "	8 "	8 "

Plain, Rock, Border Rock, Panel, Rope, Whirlwind Scroll, Tool Face, and six designs of Broken Ashler Face Plates for above sizes.

ANGLE BLOCKS

Length	Width	Height
24 inch	8 inch	6 inch
24 "	12 "	6 "
24 "	16 "	6 "

Rock Face Plates

24 inch	8 inch	8 inch
24 "	9 "	8 "
24 "	10 "	8 "
24 "	12 "	8 "
24 "	16 "	8 "

Rock Face Plates

The above adjustable to angle from 1 to 90°

SILO BLOCKS

24 inch	12 inch	8 inch
12 "	12 "	8 "

Rock Face Plates

WATER TABLE BLOCKS

24 inch	8 inch	6 inch
24 "	12 "	6 "
24 "	16 "	6 "

Plain Face Plates

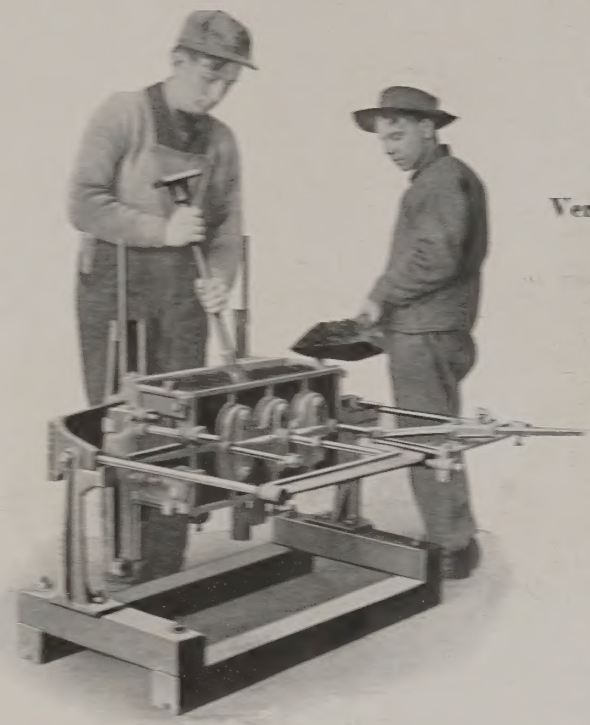
24 inch	8 inch	8 inch
24 "	12 "	8 "
24 "	16 "	8 "

Plain Face Plates

Chimney, Pier and Gate Post Blocks. 16 inch square—Rock or Plain Face.

WRITE FOR OUR SPECIAL BOOK OF FACE PLATES

"Northwestern" AUTOMATIC ADJUSTABLE BLOCK MACHINE



Filling and Tamping

Vertical Core and Top Plate Lift.
Down Face Tamping Device.
Special Face Tamping Device.
Roller Block Delivery.
Balanced Pivot Swing Rigging.
Foot Release for Swing Rigging.

Has Detachable Top for Mounting Silo, Veneer, Pier, Chimney and Gate Post Block Attachments.

Construction. This machine has no cogs, gears or ratchets to wear out or clog up, and is made of the famous "Concrete Machinery Mixture," consisting of pig iron, steel and wrought iron bearings, producing castings of close texture and great strength and stiffness, a *very necessary* feature in thin face plates where there is considerable strain from tamping.

The *frame* or *base* can be furnished either of steel or heavy timber and either makes a very firm and rigid base.

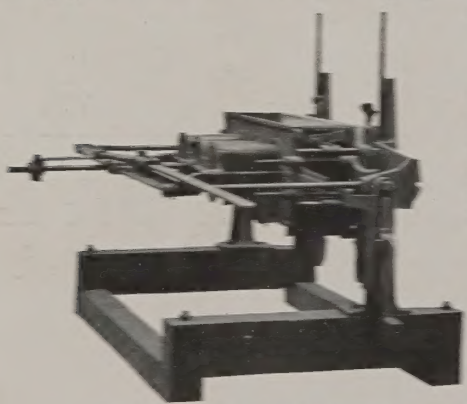
The swing rigging is composed of a frame with a heavy cast iron bed, on which is a track made of cold rolled steel and the carriage on which rests the pallet and block.

The *mould* or *flask* is held firm and solid by means of side clamps which are adjustable for different size blocks.

This is a *three-core machine* and makes a continuous air space in the wall. The cores have guides which draw them away in a true straight line from the mould and eliminates all twisting and turning movements so common to many machines. The cores are controlled by a lever which draws them vertically from the block and also raises the top plate when the cores are entirely out of the block. They may be drawn in either a horizontal or vertical position. This Automatic Lever Lift eliminates all danger of breakage by drawing the cores smoothly and evenly away from the block and saves hundreds of dollars in cement.

The *Pallets* are made of wood. Iron pallets are expensive and out-of-date. The cores and plates are adjustable to permit use of any thickness pallet.

Operation. The method of operating is very simple and unskilled labor can do the work quickly and make good blocks. A pallet is placed on the machine; side and ends locked in place, and the mould is swung into a horizontal position for tamping. A view of the illustration at the top of the next page shows the block tamped and complete, being pulled to the front for the purpose of removal. It will be noticed with one movement of the lever the cores are raised, and the top removed (releasing side and ends all in one operation.)



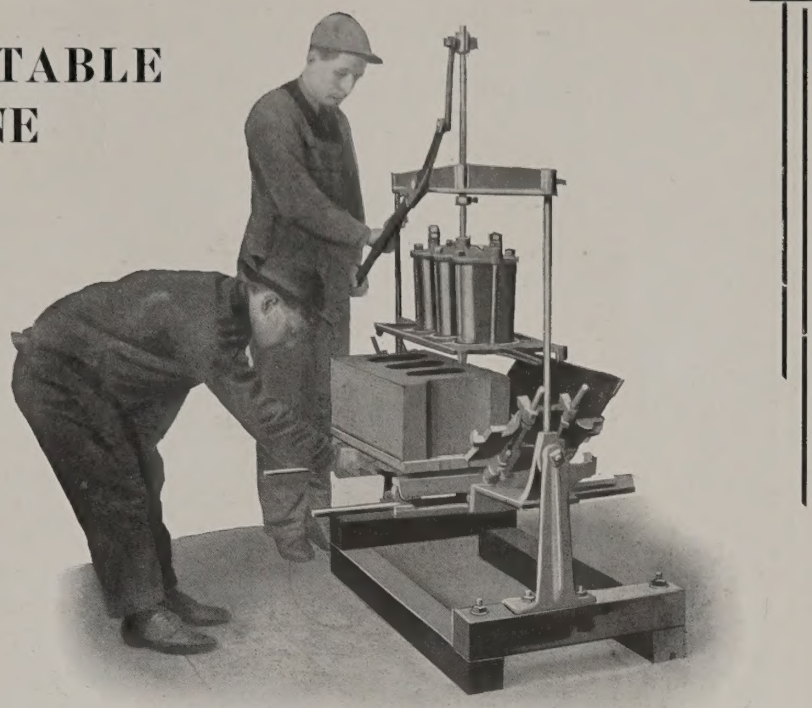
Cores Withdrawn for Tamping the Face

When a special facing is desired a couple of shovel's full of richer mixture can be thrown in with the cores removed as illustrated and the face tamped. This makes a better face and more water-proof wall. Colored material can also be used in the same way. The body of the block can be made of coarser material thus very materially cheapening the block without lessening the strength or durability. This method of removing the cores for tamping the face increases the efficiency of the machine as there is no tamping in and around the cores, which is slow painstaking work.

Capacity. The machine will work as fast as concrete is fed in. Our customers write that a team of men will make a block every two minutes, or at the rate of three hundred per day. The testimonials which we receive every day from our customers is the greatest recommendation we could give. The "Northwestern" Automatic Adjustable is not a new machine but has been used for years. We have made improvements and additions until it is positively the best all-round machine ever made.

"Northwestern" AUTOMATIC ADJUSTABLE BLOCK MACHINE

Time is the Great Test for Any Machine and the Fact that it has Stood the Test of Years is Proof of its Superiority.



The Block Comes Out on a Roller Carriage

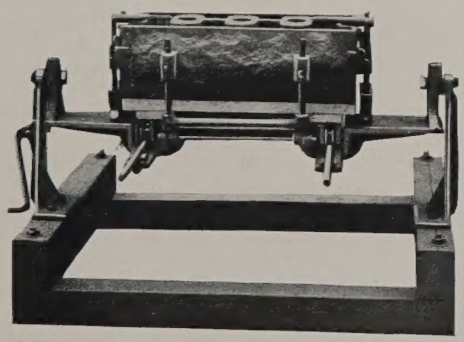
Balanced Pivot Swing Rigging. A view of the illustrations will show this machine in both vertical and horizontal positions. The bearing on which it swings from one position to another is the balanced pivot, and the ease with which it can be swung from one position to another is a remarkable feature. Very little exertion is required to swing to either tamping or vertical position. There is no bulky and heavy block to turn by sheer force; no danger of letting the mould fall too heavily and break the block. It works automatically and noiselessly and is the nicest feature ever put on any machine. *It stops the leaks in the loss of blocks and makes the work easy and attractive.*

Blocks Made on Down Face Principle. This is a face down tamp machine acknowledged by all authorities to be the best method of making blocks. A wet mixture can be used because of the automatic core drawing device which enables the operator to use a semi-dry mixture for the facing and coarse, wet material for the remainder of the block. A wet mixture makes the best blocks; insures perfect crystallization; means less cement; makes blocks impervious to water, moisture, heat and cold; and the blocks will be stronger, more lasting and less liable to crack.

Roller Bearing Block Delivery. This is by far the best device ever invented. By means of this block delivery system the block rolls out to the side of the machine and at just the position where it can easily be picked up from the carriage. There is no reaching down among a lot of plates and no danger of bumping the mould and marring or breaking. This carriage saves about half the work of the ordinary machine; makes the work attractive to the operator and saves material. Without reservation we guarantee this to be the finest system of removing the block to be found and the only device of the kind obtainable.

SPEED. The speed of a machine is one of the important points in the manufacture of blocks. If you are handicapped by having a slow, cumbersome machine it means loss of time and money. The test of a machine however, is not only the speed, but the time and work and how many perfect blocks can be made under all conditions. This machine is designed for both speed and perfection in blocks, and the combination of the two places our operators miles ahead of the nearest competitor.

GREAT VARIETY OF SIZES AND DESIGNS. We show on page 3 a list of all designs and sizes of blocks for which we have plates. This number can be varied into the hundreds by using improvised blocking and without any additional plates. We are continually adding new face plates and moulds fully illustrated and described in a face plate book which we will send on request The variety of sizes and designs should appeal to every block maker or contractor as it will enable him to supply practically every block or design required.



Top removed for making Pier, Chimney, Veneer & Silo Blocks

GUARANTEE. We fully guarantee this machine to be just as represented; to turn out all the blocks specified; to be perfect in construction, subject to replacement of any defective part at any time. We make the broad claim that more blocks can be made in a day on this machine with less labor than any other machine manufactured and sold—the big power machines alone excepted.

Outfit No. 1. Complete machine and necessary plates for making one size block 24 inches long, any one width or thickness mentioned on page 3, double end tamper and steel screed. Price $115.00

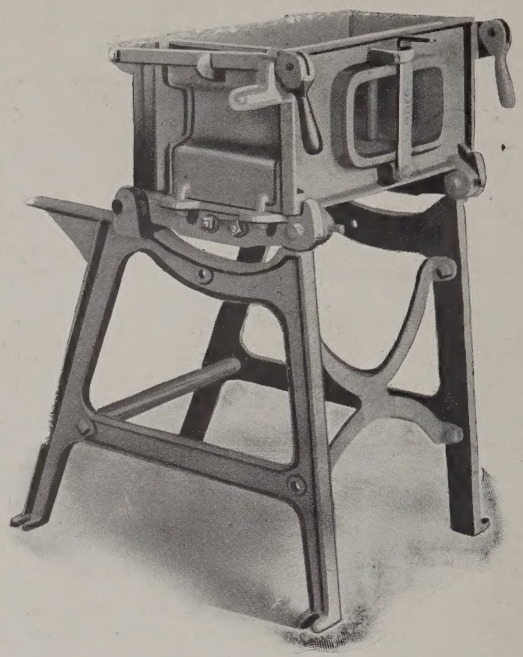
Outfit No. 2. Complete machine and necessary plates for making blocks 24 inches long, 1-2, 1-4 and 3-4 size, any one width or height mentioned on page 3, with necessary face plates return end plate, gable plate, double end tamper and screed. Price $125.00

Outfit No. 3. Complete machine and all necessary plates for making every size and shape block mentioned on page 3, in rock and plain face together with tamper and steel screed. Price $250.00

Bank Building made on Northwestern Automatic Adjustable by Anton Miller, Kiel, Wis.

"Northwestern" LEADER BLOCK MACHINE

Makes the Blocks Face Down
Single or Double Core
Most Adjustable and Convenient
Inexpensive Block Machine Made



As the name implies this machine is a "leader" in every sense of the word. It was designed to fill a long felt want of an adjustable block machine at an economical price. It makes practically every size block or style desired for any building and has a great many features of the higher priced machines in addition to many good points of its own not found on other block machines. We challenge any manufacturer of concrete machinery to produce a machine as economical in price and having as wide a range of adjustability. We give below a list of all the sizes and faces which shows a variety sufficient to suit anyone's taste and of any shape necessary to construct almost any building. We guarantee this machine to be the best low priced machine ever made.

The entire flask and block are turned before the cores are removed, permitting of using a very wet mixture without danger of breakage, the cores being removed vertically. The advantage of turning the entire flask before any plates or cores are released will be appreciated by all block makers and discriminating people as it leaves the block in its natural position before withdrawing its support and the further advantage of swinging all plates away from the finished block is a feature incorporated only in our machines.

Construction. This machine is made of gray iron castings, mounted on a heavy, solid frame which is securely bolted together. The construction is towards simplicity in design and we have eliminated all screws, springs, ratchets, cogs or gears, which are undesirable, filling with cement quickly, wearing out in short time and necessitating frequent repairs. The mold has rocker bearings for swinging to a vertical position for removing the core and plates. Face plate is attached to the rocker bearing and end cores and top plate are hinged to the face plate. Hinges are so constructed that top and end plates tilt only a few degrees, leaving them in a convenient position for again closing the mould.

Blocks Are Made Face Down. This is the popular method of making building blocks and also effects a saving in material, as a richer mixture can be used for the face and coarser material for the remainder of the block. Colored material can be used in this way, making some very attractive blocks when desired. The cores can be left out until the face is tamped, obviating the necessity of tamping in and around cores, which is tedious work.

Wooden Pallets. In this machine, as well as all of our block machines, we use and recommend wooden pallets. Plain lumber with two cross strips on the back is all that is necessary.

Operation. The operation is simple and anyone can make good blocks. Two levers entirely lock all parts of the flask together all in one operation. After the block is tamped, it is swung over on the rocker bearings, core lock released, center core withdrawn, end cores and top swung out and away from the block, leaving it entirely free from all plates and in a very handy position for removal. A view of the illustration on the opposite page shows the block, with all cores and plates swung away from the block.

Vertical Core Lift. The cores are held in position by means of a lever clamp, which is quickly removed. The clamp holds them firm and rigid and when locked in place no amount of tamping will loosen them. The cores are tapered to permit of removing without breaking or marring the block.

Concrete Makes Attractive Structures

ALL THESE BLOCKS CAN BE MADE ON THIS MACHINE

OBLONG

Lengths	Width	Height
16 in. 12 in. 8 in. 4 in.	8 in.	8 in.
16 in. 12 in. 8 in. 4 in.	10 in.	8 in.
16 in. 12 in. 8 in. 4 in.	12 in.	8 in.

Deep Rock, Plain, Tooled, Tooled Margin Rock, Tooled Margin Bushhammer, Panel, Whirlwind Scroll, Rope, Cobble Stone, and 4 designs of Broken Ashler Face plates and Return Ends.

CIRCLE BLOCKS

6, 7 and 9 ft. Radius.

Length	Height	Width
16 in.	8 in.	8 in.
16 in.	10 in.	8 in.
16 in.	12 in.	8 in.
8 in.	8 in.	8 in.
8 in.	10 in.	8 in.
8 in.	12 in.	8 in.

Rock or Plain Face Plates.

FOUR-INCH COURSE BLOCKS

Length	Width	Height
16 in.	4 in.	8 in.
16 in.	4 in.	10 in.
16 in.	4 in.	12 in.
4 in.	4 in.	8 in.
4 in.	4 in.	10 in.
4 in.	4 in.	12 in.
8 in.	4 in.	8 in.
8 in.	4 in.	10 in.
8 in.	4 in.	12 in.

Makes 2 blocks 16×4 at a time
" 4 " 4×4 "
" 2 " 8×4 "
" 4-4×4 and 2-4×8 at a time

Plain, Rock, Panel and Tooled Face Plates.

Bay Window Attachment

Makes any angle wall from 25 to 75 degrees for either inside or outside angles.

Lgth. of Outside Faces	Height	Width
16 in.	8 in.	8 in.
16 in.	10 in.	8 in.
16 in.	12 in.	8 in.

Plain Rock, Panel and Tooled Face Plates

Gable Blocks

Dividing plate for making ½, ⅓, ¼, cutoff.

Window or Joist Blocks

Cutoff Plate for allowing space for Joists.

Water Table Blocks

Lgth.	Height	Width
16 in.	8 in.	8 in.
16 in.	10 in.	8 in.
16 in.	12 in.	8 in.

Plain Face.

Inside Corner Blocks

Lgth.	Height	Width
16 in.	8 in.	8 in.
16 in.	10 in.	8 in.
16 in.	12 in.	8 in.

Half Rock, Half Plain Face.

Silo Blocks

Lgth.	Height	Width
16 in.	8 in.	9 in.
8 in.	8 in.	9 in.

Rock Face Plate. 14, 16, 18 ft. diam. Special reinforcing cores.

"Northwestern" LEADER BLOCK MACHINE

Makes Perfect Blocks. A Popular Low Priced Machine

Single or Double Core. We can furnish either single or double cores to suit the demands in each locality. It is an easy matter to change from single to double core or vice versa and an additional core plate and the necessary cores are all the additional equipment necessary for both. Unless otherwise specified we ship single core machines. Some people claim the single core is the easiest to tamp but we have no recommendations as to the relative qualities of either one.

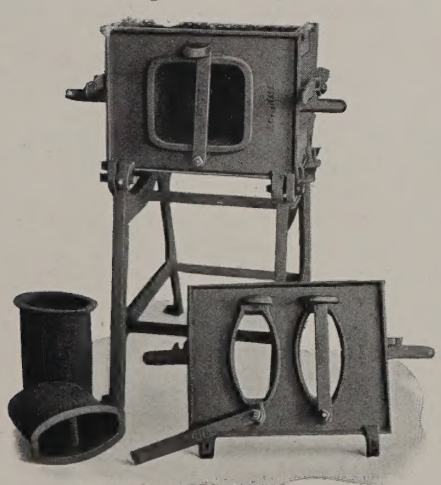
Special and Fancy Face Plates. Unless otherwise specified we ship rock face plate. On the opposite page we give a list of all the face plates in stock which can be used in connection with this machine and the variety of design is extraordinary in a machine sold at this price. Face plates can be secured from time to time as desired and we issue a special face plate book which is sent free on request, showing old and new designs and giving various general information.

Large Variety and Size Blocks. One of the valuable features and an item of considerable importance to the block maker is its adjustability. We can furnish flasks for three different size blocks as listed under prices and by means of the division plates which are furnished with each machine, the variety of sizes is further increased. With the outfit sent with each machine, blocks could be made 4, 8, or 16 in. long, 8 in. high, and in the width of the flask ordered; also blocks for corners; joist blocks and gable blocks. Additional equipment can be secured at any time for making circle blocks, course blocks, bay window blocks, water table blocks, inside corner blocks, or silo blocks.

A One Man Machine. One man can operate this machine with ease and speed, but it is not necessarily confined to one man, as it will work as fast as the concrete is fed in, and three men can work to advantage. The construction and operation of the machine permit of the greatest amount of blocks per day, and a team of three men will make as good a showing as the same number on the higher priced and much advertised block machines.

Cost of Concrete Blocks. It is impossible to give a very definite figure because the labor and the speed of the operators enter largely in the cost of the block; for approximate figures, however, and basing the work on a team of three men and 150 blocks per day, they can be produced for 10c each, figuring on the basis 1 to 3 of cement and sand, labor at $1.75, cement at $1.70 per bbl. and sand at 50c per cu. yard.

Outfit. With each machine we furnish the following plates
1 Rock Face Plate for whole blocks.
1 Rock Face Plate for ½, and two ¼ size blocks.
1 Pair of Rock End Plates.
1 Pair of Core End Plates.
1 Pair of Dividing Plates for fractional size blocks.
1 Pair of Joist Block Plates.
1 Steel Screed.
1 Double End Tamper.
1 Sample Wood Pallet.
1 Gable Block Dividing Plate.
Plugs for making whole blocks.



Either one or two cores furnished

All plates move away from the block in removing

Bay Window Attachment. We can furnish with this machine a bay window attachment which will make any angle from 25 to 75°. The bay window attachment consists of two face plates for making angle blocks. It is in two sections, one 12 inches and the other 4 inches long. This attachment has an adjustable set screw which enables the making of bay window blocks of various angles and by using a gable dividing plate both inside or outside angles can be made in sizes and with face plates as listed under bay window blocks on opposite page.

Circular Blocks. We can furnish also, circular block attachments for making circular walls, 6, 7 and 9 ft. radius. The outfit consists of circular face plate which is adjusted to the machine the same as the regular face plate, and special end core plates are furnished, which have lugs for holding them the proper angle for each radius.

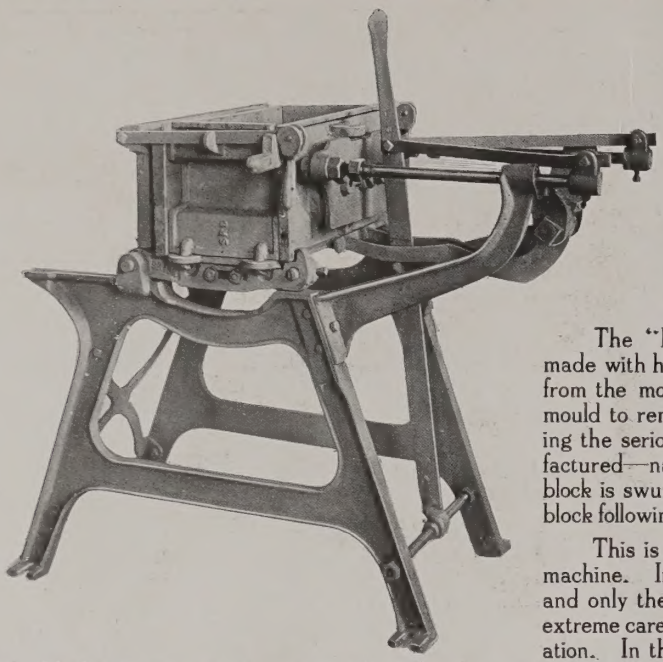
Four-Inch Course Block Attachment. These attachments are inexpensive and materially increase the appearance of the wall by breaking the monotony of whole blocks. A number of course blocks can be made at one time either 4, 8 or 16 inches long, as designated on opposite page. In making course blocks it is necessary to have one extra division plate for every two blocks as one of the blocks rests on the division plate. Attachment consists of two face plates, (one making two blocks 16×4, and the other 4 blocks 4×4 and two blocks 8×4) one pair of end doors, one return end plate to match face plate, dividing pallet and four dividing plates.

Silo Blocks. An attachment for making silo blocks can be furnished which would include full and half size rock face plate, division plate for half size block, set of dovetail end cores, set of special center cores and plain back plate. The special cores allow for space for using reinforcing when laying the blocks. Silos made in this way never crack and by means of the special dove-tail cores the mortar binds the blocks together so as to make one continuous wall with dead air space running entirely from top to bottom.

Prices of "Nortbwestern" Leader Block Machine.

Leader Block Machine. 8x8x16, weight 175 pounds, price	$30.00
" " " 8x10x16 " 200 " price	35.00
" " " 8x12x16 " 225 " price	40.00
Extra Flask Attachment for 8x8x16	10.00
" " " 8x10x16	15.00
" " " 8x12x16	20.00
" Face Plates and Designs	3.00
Bay Window Attachments	6.00
Circle Block Attachments, state radius of circle	6.00
4 inch Course Block Attachment	12.00
Silo Block Attachment	15.00

"Northwestern" Improved Block Machine



NOT AN IMITATION BUT THE HIGHEST DEVELOPMENT OF HORIZONTAL CORE MACHINE

Perfect in Mechanical Construction. Entirely New and Original Method of Core and Block Removal

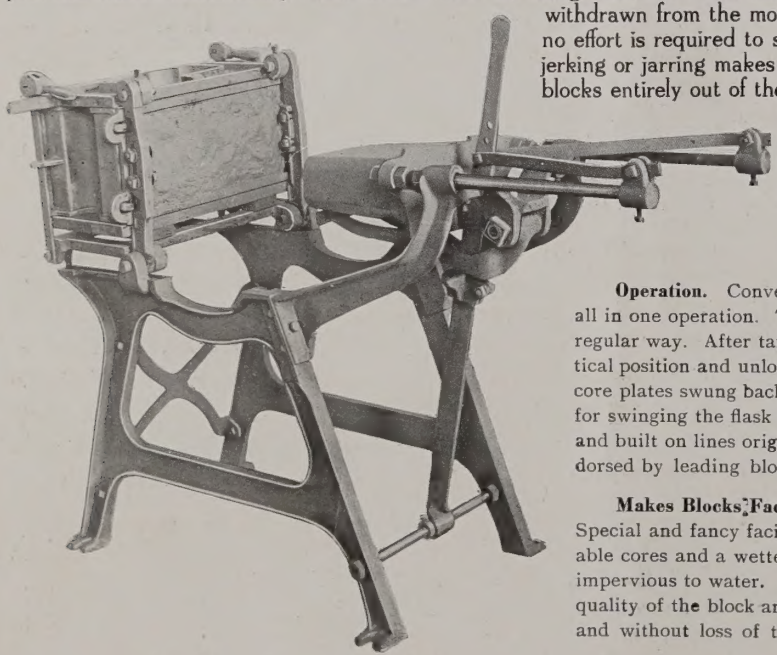
The "Northwestern" Improved is the only face down block machine made with horizontally movable cores which are withdrawn entirely away from the mould before it is swung to a verticle position, allowing the mould to remain intact and locked during the swinging operation, eliminating the serious objection to all horizontal core machines heretofore manufactured—namely, the releasing of all or part of the plates before the block is swung to an upright position, frequent collapse or breakage of the block following.

This is an entirely new invention and found only on the "Improved" machine. In other machines of this class the block has to be released and only the side and bottom plates swung with the block, necessitating extreme care to avoid breaking or collapsing of the block during the operation. In the "Improved" the flask remains perfectly intact and locked until the block is in its natural position, when the plates are released and moved back and entirely away from the block, avoiding any possible chance of injury and leaving the block in a convenient position for removal.

Flask Attachments. The "Improved" is also the only machine of this description made to which extra flask attachments can be fitted, permitting of making different size blocks on the same machine. It is adjustable to three different size flasks, viz.: 8x8x16, 8x10x16, 8x12x16, making the necessary size blocks for any number of stories. Change from one size to another can be made easily and quickly and extra flasks can be secured any time and on short notice as we carry all sizes in stock.

Construction. The frame is made of heavy gray iron castings with a long reach at the base so as to evenly distribute the weight over a wide area of space and also to make the machine more symmetrical in appearance. It is strongly braced with diagonal braces at the front and heavy rod at the back. It is built for wear and is very solid and rigid—a very necessary feature in machines where there is strain from tamping. **Flask** consists of pallet, end cores, top or core plate and face plate, all consisting of the very best workmanship, perfectly fitted and squared up true. Two levers at both sides of the flask hold the mould square and true. The face plate has rocker bearing for swinging the block to vertical position. The end doors and top plate are hinged to the face plate by pins permitting them to open freely when releasing the block and are so constructed that they tilt back only about 15°, a handy position for again assembling and locking the flask.

Horizontal Lever Cores. Attached to the back of the frame is a heavy casting for supporting the lever guides and the core rest. The illustrations show the core in both positions. A hand lever draws them back by means of the core guides which work in bearings. The core guides are of polished steel and draw the cores in a true straight line from the block. A lever or arm is also provided which automatically raises as the cores are being withdrawn and acts as a shelf for holding the cores in position after being withdrawn from the mould. The cores and all levers work very smoothly and no effort is required to swing them into either position. The absence of any jerking or jarring makes the operation entirely free from vibration and loss of blocks entirely out of the question. The "Improved" is in a class by itself with many points of merit and new inventions not found on any other machine, and you can not go wrong in buying a "Northwestern" Improved Block Machine. We guarantee it against any defect and will replace defective parts any time. Shipped on approval and trial subject to return if not satisfactory.

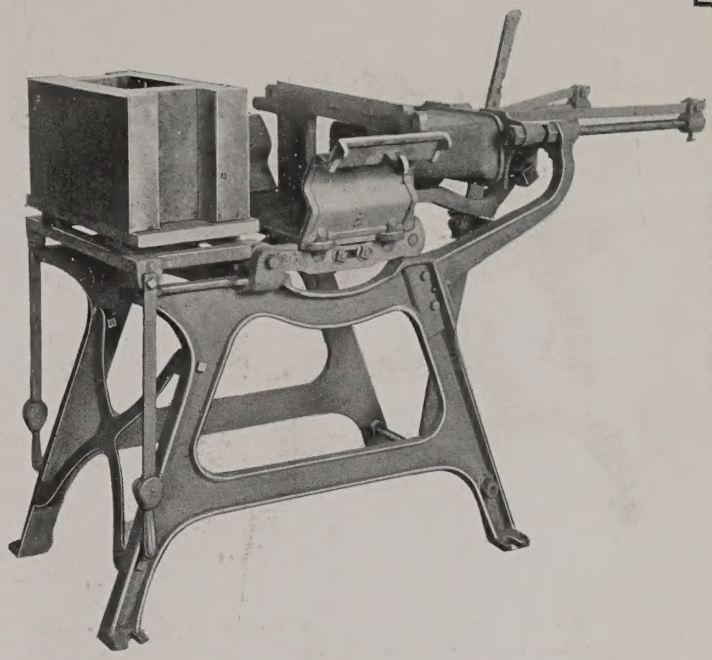


Operation. Convenient handles lock the pallet, end cores, top and face plate all in one operation. The core is swung into position and the block tamped in the regular way. After tamping and removal of the cores the flask is swung to a vertical position and unlocked. The end core plates are swung out and top and end core plates swung back and away from block. Convenient handles are provided for swinging the flask and also the plates from block. It is distinctly a new type and built on lines original with us. It has been tried out and tested and is endorsed by leading block makers and experts wherever demonstrated.

Makes Blocks Face Down. As stated before the blocks are made face down. Special and fancy facing can be easily tamped into the face because of the removable cores and a wetter mixture can also be used making better blocks and more impervious to water. A few shovels of richer mixture materially increases the quality of the block and by means of the lever core device this can be done quickly and without loss of time.

"Northwestern" Improved Block Machine

A WONDERFULLY EFFICIENT MACHINE.



The "Improved" is the handiest and most adjustable horizontal core machine made. The core lever is located in a convenient position. The levers holding the flask together are in a handy position. The fastenings are easy of access and change of flasks made easily and quickly. The method of turning all the plates before removing the block permits of using a much wetter mixture. The attachments furnished are greater in proportion to other machines, and the speed and output per day is not the least of its qualifications. It will turn out more and better blocks per day than any similar machine; will make all of them perfect in shape and with the cores properly proportioned to insure the correct amount of material and proper air space required by leading engineers and architects. The face plates are clear and deep cut and made of fine grain castings. Our rock face plates are not putty patterns but deep clear cut rock imitations and the rope, scroll, tooled, bush hammer, etc., are all just as carefully and accurately finished to produce the best effects.

Single or Double Core. We can furnish either one, or both can be shipped at the extra price. Only a core plate and the cores are all the extra equipment necessary for both. We ship single core unless otherwise specified. Both single and double cores are extensively used and we have no recommendations to make in favor of either one.

Sizes and Face Plates. We can furnish flasks for three different size blocks and by using division plates all the size blocks shown on page 6 can be made on this machine. All of the face plates shown on that page can also be supplied for this machine and the large variety of sizes and designs will appeal to every block maker. We issue a special face plate book showing all the face plates which can be furnished with each machine, which is sent free on request.

Pallets are made of wood and plain lumber with cleats on the back answers the purpose. Iron pallets are expensive and undesirable.

Capacity. With a little experience, from 100 to 200 blocks can be made per day, according to the experience and energy of the operator. A run of 150 for a team of three men is not unusual, which also allows for carrying away the blocks made the previous day and wetting down the old blocks.

One man can operate the "Improved." A great many of the machines manufactured are too clumsy for one man and others are built so only one man can operate it to advantage. It is different in the "Improved." One man can operate it quickly and conveniently or three or more can work to advantage.

A good block machine is indispensible. A successful block maker must cater to public taste. The old square block houses are rapidly giving precedence to the new and artistic designs and the block maker with a machine on which he can make only a few size or style blocks is a "back number." The man who has his plant equipped with the "Improved" will be able to command the trade because he can supply public demands or architect's specifications and make practically any kind of block.

Convenient Store Building made on Northwestern Improved Block Machine.

ACCESSORIES.

Full description and prices on page 7.

Bay Window Attachment. For making any angle from 25 to 75°.

Circle Block Attachment. For making circular walls in 6, 7 or 9 ft. radius.

Four-Inch Course Attachment. A very desirable attachment. Makes a number of 4 in., 8 in. and 16 in. blocks at a time.

Silo Block Attachment. Makes blocks for 14, 16 or 18 ft. diameter. Furnished with special dovetail end and center cores. Allows space for wire or cable re-inforcing of wall.

PRICES.

Northwestern Improved, 8x8x16, weight 225 pounds, - **$50.00**

Northwestern Improved, 8x10x16, weight 250 pounds, - **$55.00**

Northwestern Improved, 8x12x16 weight 275 pounds, - **$60.00**

Either Single or Double Core.

Extra Flasks.

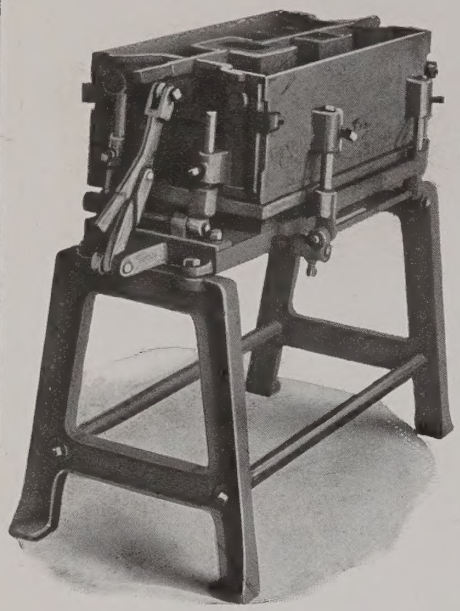
8x8x16, - - **$15.00**
8x10x16, - - **20.00**
8x12x16, - - **25.00**

Extra Face Plates.

Any design shown on page **$3.00**

"Northwestern" Standard Block Machine

Operates Easily and Rapidly. Simple, Strong and Durable. Quickly Adjusted to Various Sizes. No Turning of Flasks or Careful Handling Required.



A Record Breaker for Block Production.

The "Standard" is a large, powerful block machine designed for carpenters, contractors, masons and others and is an exceptionally rapid and easily operated machine so simple in construction that the illustrations are misleading as to the efficiency and adjustability. It makes blocks 24, 18, 12 and 6 inches long, 8 inches high and 8, 9, 10, 12 and 16 inches wide; making all the different size blocks required for the basement, first, second, third and fourth stories and in different lengths. **Chimney, pier, gate, veneer, bay window, gable, joist, inside corner, silo and water table blocks can be made** and the changes are so quickly made that scarcely any time is lost. Owners of this machine can take contracts for any size blocks and it pays for itself many times over in the greater number of blocks produced each day. It is a machine with which you can work against time and win out, because there is no turning of flasks, no careful handling required for fear of collapse or breakage, no running around to remove hooks, no tilting of the machine, no lifting of plates, no labor raising the mould. Each block will be perfect because every joint is carefully fitted, each plate is accurately adjusted, and all parts work with a smoothness and precision like clock work.

Construction. No "Rule-of-the-thumb" applies to its make up. It is of the same high grade material found in our costliest machine. It is almost identical to our high grade and popular "Automatic Adjustable" block machine, the only difference being in the method of lifting the cores and not having the balanced pivot rigging. The cores are raised by hand and vertically. An elbow lever releases all the plates and each end and side are hinged to the frame, swinging down and away from the block. The base is heavy gray iron and the whole machine, base, plates and all are designed for long life and to stand wear. The elbow lever is the nicest arrangement of locking all the plates it is possible to find. Simply push the levers down and all plates are securely and firmly locked and no amount of vibration or jar of tamping will loosen them. There is not a thing on the whole machine to get out of order. The plates are slipped into guides and held in place by set screws, making adjustment or change of plates easy and permitting of using any thickness pallets. Plain wooden pallets are used.

Special Facing. The blocks are made on the side face plan. Where a special facing is desired a plain piece of tin or sheet steel slipped in a short distance from the face permits of using a fine mixture for the face and coarser material for the remainder of the block. As the block is being tamped this can be raised gradually so that the facing receives the proper tamping.

Outfit. 1 Rock Face Plate for making whole blocks, 1 Rock Face Plate for making ½ and two ¼ size blocks, 1 Rock End Door, 1 pair Core End Doors, 1 pair Dividing Plates, 1 Striker, 1 Double End Tamper, 1 Sample Wood Pallet, 1 Gable Dividing Plate, 1 Pair Joist Block Attachments.

Silo Attachment. A special attachment for making silo blocks any diameter from 14 to 20 ft. can be attached. This attachment consists of two face plates for whole and half size, special dove tail end cores, special center cores, dividing plate and back plate. All of our silo attachments make blocks as shown on page 13.

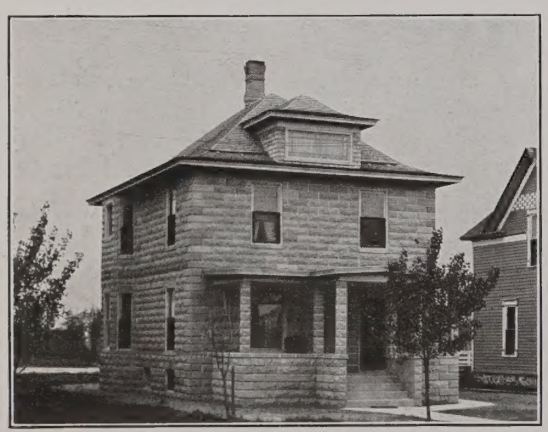
The Elbow Lever releases all Plates

Price of "Northwestern" Standard

Standard 8x8x24,	Weight 265 pounds,	$50.00	
" 8x9x24,	" 270 "	51 00	
" 8x10x24,	" 275 "	53.00	
Standard 8x12x24,	Weight 282 pounds,	$56.00	
" 8x16x24,	" 300 "	60.00	

Outfit Price for making all Oblong, Veneer, Water Table, Chimney, Silo, Inside Corner, Gable and Joist blocks; specified in list below in Rock and Plain Face $85.00

Veneer Dividing Plates	$ 3.00
Chimney, Pier and Post Attachment, Rock or Plain Face	13.00
Water Table Plate, Plain Face, or any Design Face Plate	3.00
Silo Attachment for making Rock Face, half and whole size blocks, necessary cores, dividing plate, etc.	15.00



Dwelling at Rice Lake, Wis., made with this Machine.

BLOCKS MADE ON THIS BLOCK MACHINE

OBLONG

Lengths 24, 18, 12, and 6 inches; width 8, 9, 10, 12 and 16 in; height 8 in.

Plain, Rock, Border Rock, Panel, Rope, Whirlwind Scroll, Tool Face, and six designs of Broken Ashler Face Plates for above sizes.

WATER TABLE BLOCKS

Length 24 in.; width 8, 12 and 16 in.; height 8 in.

Plain Face Plates for above sizes

INSIDE CORNER BLOCKS

Length 24 in.; width 8, 9, 10, 12 and 16 in.; height 8 in.

Half Rock, Half Plain Face Plate for above sizes.

WINDOW JOIST BLOCKS

Cut off plate for allowing space for joist.

VENEER

Makes two Blocks at a time.

Length 24 in.; width 4, 4½, 5, 6, and 8 in.; height 8 in.

Plain, Rock, Border Rock, Panel, Rope, Whirlwind Scroll, Tool Face and six designs of Broken Ashler Face Plates for above sizes.

CHIMNEY BLOCKS

16 in. square, Rock or Plain Face.

SILO BLOCKS

Length 24 and 12 in.; width 12 in.; height 8 in.

Rock Face Plates for above sizes. For 14, 16, 18 and 20 ft. diameter.

GABLE BLOCKS

Dividing Plate for making ½, ⅓ or ¼ cutoff.

"Northwestern" Handy Block Machine

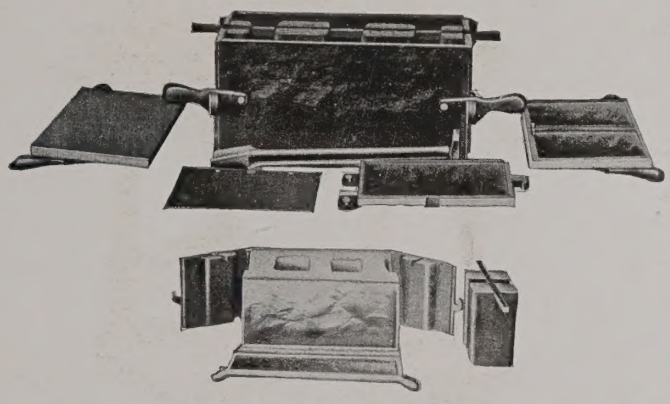
DESIGNED ESPECIALLY FOR INDIVIDUAL USE

Almost every property owner, farmer or small block maker will find a cheap and practical block machine a great convenience. We have designed this machine especially for individual use and its operation is so simple that anyone, without previous experience, can make good blocks. It is made of high grade close grained castings and will not get out of true. This machine is manufactured with or without a base and each has its own advantages. When the unmounted machine is used, no pallets are necessary as the blocks are made on the floor or any smooth surface and the machine is removed from the block. In this method the machine is moved and not the block, eliminating all possible danger of breakage.

When a mounted machine is used, the face plate is unlocked, and the end plates and back plate are swung back in the position as illustrated. This machine makes blocks 16 inches long, 8 inches high and 9 inches thick and additional face plate and the necessary dividing plates are furnished for making one-half size blocks. The illustrations show both the mounted and unmounted machines and we call attention to the nice clear cut blocks made on either one and every block will be a perfect duplicate of the blocks shown here.

Speediest Low-Priced Machine Made. No levers, springs, cogs, etc. Nothing to get out of order.

Operation. In operation it is impossible to get a low-priced machine having fewer movements. After closing the flask by means of the two handles, it locks all plates together, cores are set into grooves and the mould filled with concrete material and all parts thoroughly tamped. After the material has been completely tamped, you strike off the excessive material at the top with an ordinary strip of wood making the top perfectly even and smooth. The cores are then tapped gently with the tamper to loosen them, two projecting rods are taken hold of and the cores are withdrawn from flask. Lift the handles on face plate out of the latches, which releases the face plate. The face plate is then pulled away from the block, the two end cores are swung out and away from the end, which entirely releases the green block.



Unmounted Machine and Parts

Outfit. Complete outfit with each machine consists of Rock Face Plate for whole blocks, Rock Face for one-half size blocks, Plain Face Plate, Rock Face End Door, two Core End Doors, Center Cores, Plain Dividing Plate, Double End Tamper, and two Dividing Plate Draw Hooks. In other words, everything necessary is furnished for making full and half size blocks in both plain and rock face.

Fancy Face Plates. We can furnish at any time additional face plates for making Plain, Rock, Tooled, Panel, Tooled Margin Bushhammer and Broken Ashler design. We have face plates for making one-half size blocks in Plain, Rock, Panel and Tooled designs.

Silo Block Attachment for the Mounted Machine. The mounted machine is so constructed that additional plates can be secured for making silo blocks. The silo block attachment consists of Circular Face Plates, Back Plate, Special Dove Tail End Core Plates, Special Center Cores, Rock Face for one-half size blocks and Dividing Plates. This machine will make blocks for 14, 16, 18 or 20 ft. diameter and our plan of re-enforcing absolutely prevents cracking of the wall.

A Simple Machine. This machine is so simple in construciion that it is impossible to get a machine having fewer movements. We call particular attention to the absence of levers, gears, cogs, etc., and absolutely guarantee this to be the best machine of its class made and will replace any defective material at any time. More and better blocks can be made with less labor than any similar machine made.

A Handy Block Machine for Farm Work or Small Contractors. There are so many ways in which concrete can be used to advantage that we have designed a machine especially for small block makers and for individual use, so that anyone can afford to own one for odd jobs, and for farm use this machine is unsurpassed. The intelligent farmer realizes that concrete construction recommends itself strongly on account of the protection it offers against fire and also because of its cheapness, durability and general utility. In many localities it is impossible to secure mechanics. With this machine the farmer can do his own work with his own help at his own convenience. Good sharp sand and gravel can be had almost anywhere for the hauling and by using his own labor the blocks can be made for about 7 cents each.

Uses to which Concrete can be put. Concrete can be used to advantage in the construction of well curbing, feeding floors, foundations for buildings, walls of houses, barns, milk houses, water and feeding troughs, silos, drain and sewer tile, posts, porches, piers, gates, sidewalks, corn cribs, steps, supply tanks, manure pits, root cellars, ice houses, culverts, apple houses, hen coops, etc. **The very dampness which rots lumber** and necessitates frequent replacement, **brings out** the **best qualities** of the **cement,** making it harder and harder, and indestructible. It is the best fire resisting material known, a very important thing on the farm where help is not easily obtained, and also decreases insurance.

Prices

PRICES OF "NORTHWESTERN" HANDY BLOCK MACHINE

"Northwestern" Handy Block Machine, Unmounted	$20.00
"Northwestern" Handy Block Machine Mounted	25.00
"Northwestern" Handy Block Machine Extra Face Plates, each	3.00
Silo Attachment	15.00

Reinforced Concrete Barn by G. R. Knapp & Co., Philadelphia

"Northwestern" Silo Block Machine

Silo Machine Mounted

MAKES TRIPLE REINFORCED WALL
EACH BLOCK AND EVERY TIER FIRMLY BOUND TOGETHER

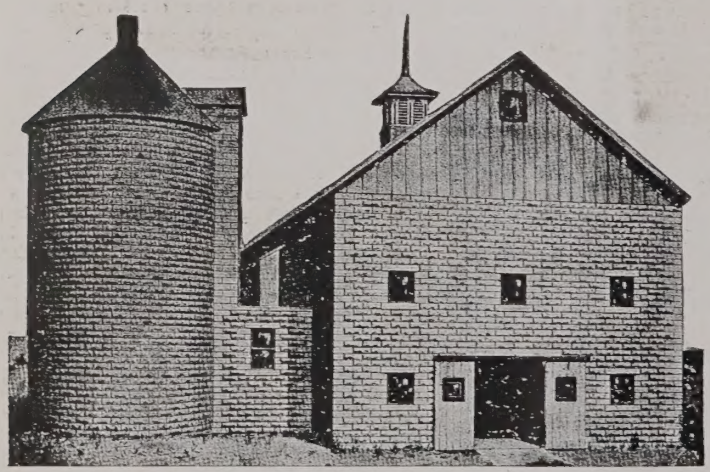
Can be reinforced by wire or cable. Makes perfect air tight silos with smooth perpendicular inside walls, allowing the contents to settle without forming air spaces, saving ensilage and avoiding fermentation. Frost proof, fire proof and crack proof. Are desirable in every way and easy to make.

Concrete Silos are Best. The usefulness and value of a silo has been so thoroughly proven that every up-to-date farmer is either contemplating or building one. It is no longer a question of whether to build, but the kind that will best serve the purpose. The old wooden silo is practically a thing of the past, as fully 90% of them either burn, rot or tumble down every year. Wood decays rapidly, steel corrodes or rusts and stone is too expensive. Concrete has been put to the test and has proven the ideal material for this purpose. It will not warp during the summer, will not rot from the effect of acid in the ensilage, needs no repairs, is warmer in winter and cooler in summer, preserves the ensilage at all times and makes an everlasting structure air-tight, frost proof and free from any secondary expense.

Hollow Walls as Compared with Solid Walls. We often have to answer this question of whether solid walls are as satisfactory as hollow walls. We can say candidly and after investigation that the solid wall is not practical or desirable. We have talked with many owners of solid silos and block makers who are all unanimous in the opinion that "if they had to do it over again they would build hollow walls." The solid wall freezes rapidly and ruins tons of ensilage every year, and as it has a feeding value of about $5 per ton, it would mean loss of from $200 to $300, representing twenty to fifty tons of ensilage. It is not any cheaper and has not one good feature to recommend its use, as the cost of forms are high, (a good form costing about $200), hard to handle and requiring a number of men to move them.

"Northwestern" Silo Block Machine. Makes uniform silos of correct shape and dimensions, making the erection a simple and easy matter. The only practical machine on the market. We call attention to the illustrations below which show the method of laying the blocks. It will be noticed that under this plan a continuous air space runs entirely from the top to the bottom of the silo, avoiding any danger of frost striking through and causing a spoiling of the ensilage as the weather becomes warmer. We consider our method of reinforcing the only device of the kind and the strongest point in favor of this silo mould. It will be noticed that the end cores leave a dove-tail space and when this is filled with cement it securely binds each block together forming an interblock tie which makes a continuous circular wall instead of a number of concrete blocks. Each block also has a small round core hole in the center and the dove-tail space of the upper tier of blocks come directly over the circular hole in the lower tier and when this is filled with cement it makes an inter tier binding or tie which makes a double reinforcement of the blocks and the tiers which in ordinary cases are sufficient to hold very heavy lateral strain. A further improvement however, has been made and space is left in the center of the top of each block for inserting twisted wires or cable which can be drawn up taunt and forms a reinforcement sufficient to hold any lateral strain which might be placed in the silo. This makes a triple reinforcement which is easy and quickly accomplished and eliminates all of the difficulties which have heretofore existed in silo construction.

Silo Machine Unmounted



Fire Proof Silo & Barn at Huntley, Ill. made on "Northwestern" machine by Mr. Conley. This Style of Barn and Silo has been copied everywhere.

The Best Silo Machine Made. Our method of block making is endorsed by the Agricultural Department at Washington and in brief the Scientific Assistant writes: "In reply to your favor of June 2nd I will say that I like your plan for building silos. I believe the concrete blocks will take the place of the solid wall and that they are more economical. I have seen silos reinforced with No. 9 galvanized twisted wire which give good satisfaction. I have also seen hollow silos without reinforcing which cracked from the top to the bottom. If you could device a concrete door you would have a silo that would be practically indestructible in all parts." This comes from people who make a business of knowing what they are talking about and it is a sweeping recommendation in favor of our silos.

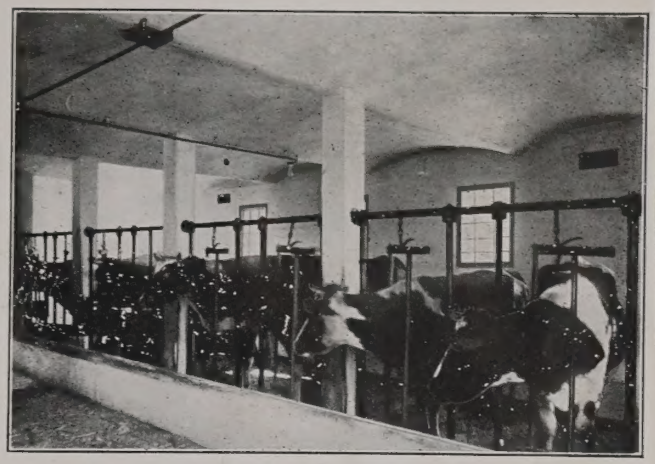
Complete Instructions sent with each Machine. We go into detail regarding the construction of silos in a special circular which is sent free with each machine. Any of these instructions are so clear and easy that any mason, blockmaker, or farmer can construct a silo with our blocks.

Diameter of Silos. Our machines make either 14, 16, 18 and 20 ft. silo. A 16 ft. silo 30 ft. high will hold 125 tons, 18 ft. high 160 tons, 20 ft. high 200 tons.

It requires about 50 tons for 10 cows, so the size of the silo can be determined from this.

"Northwestern" Silo Block Machine

Operation. The operation of the machine is practical as well as quick and easy. The mould is locked as shown in illustration on opposite page, the cores placed and the material well tamped into the mould. After leveling off the top of the block the front plate is unlocked and the face plate taken entirely off. The end cores are then swung outward and away from the block and both back and end plates swung back on the stand leaving the block in handy position for removal with all plates entirely away from it. The end cores are hinged to the face plate and turned back only a few degrees, permitting of easy assembling for the next block. Plain wooden pallets are used and the machine is made of the best gray iron castings fitted together smoothly and accurately and guaranteed in every way. It is sent on trial and approval subject to return if not satisfactory.

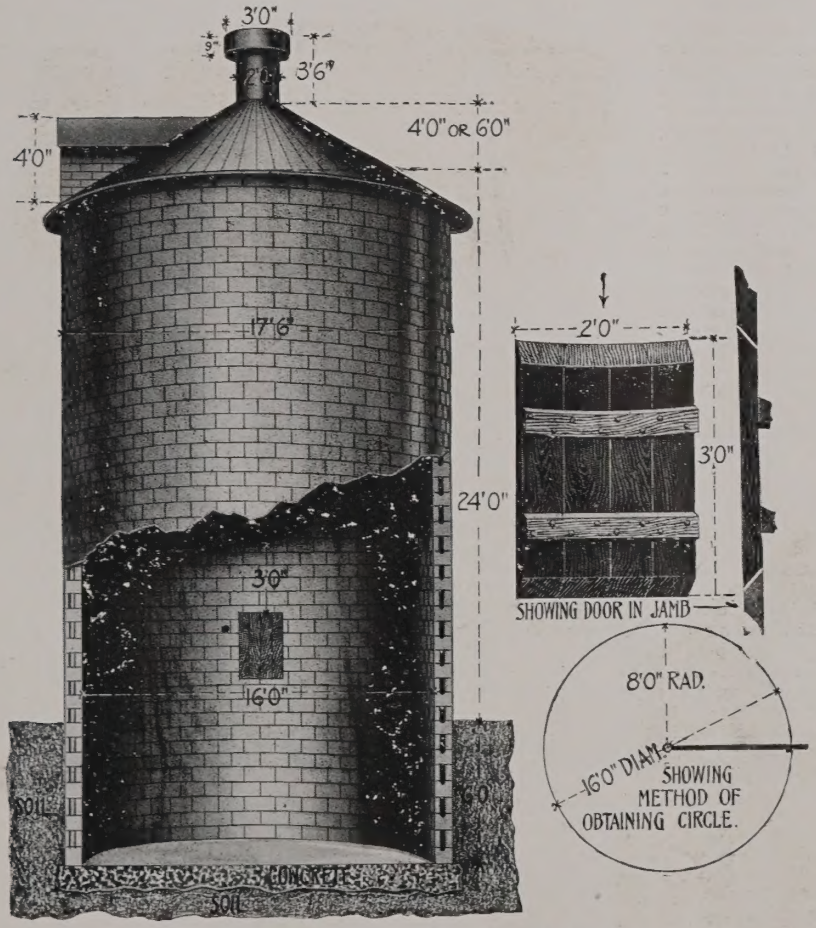


Reinforced Cow Stable made by C. R. Knapp & Co., Philadelphia

Outfit. With each machine we furnish a sample pallet, tamper, face plate for whole and two ½ size blocks, dividing plates, special dove-tail end cores, center cores, back plate, steel screed and dividing plate hooks.

Mounted or Unmounted. We can furnish this silo machine mounted or unmounted and each one has a distinct advantage. In case of a mounted machine the block is removed but in the unmounted machine the mould is removed instead of the block, permitting of blocks being made on any smooth surface and without the use of pallets, although pallets can be used if desired.

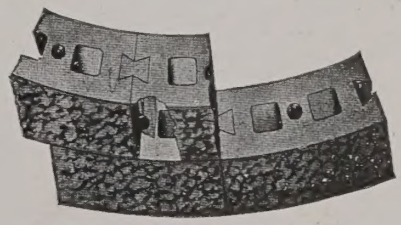
Size of Blocks. This machine makes blocks 16 inches long, 8 inches high, and 9 inches thick. It is made of close grained, gray iron castings all parts carefully planed and fitted and it works with a smoothness which is essential to making of good blocks. There is no jar or vibration in removing the plates and each block comes out true and perfect in shape. A great deal of cracking in silo walls is caused by uneven sized blocks, there being more weight on the larger sizes. There is no chance of cracking when using blocks made on this machine as they are all perfect duplicates of the original. Our method of reinforcing is the only kind to be found and makes a stronger wall than solid concrete and at half the cost. Considering the product of this machine; the special reinforcing features; and the high grade construction it can not be equaled anywhere. A contractor's business depends on the quality of the work and this machine will enable him to build silos of which he can be justly proud and which will bring more orders. We thoroughly guarantee this machine and will send on trial subject to return if not satisfactory.



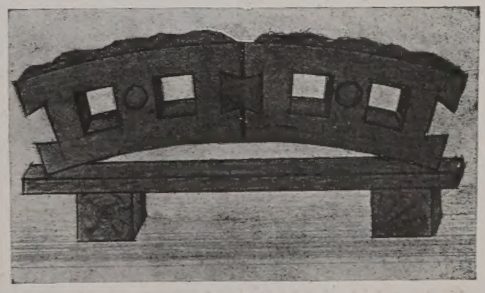
Reinforcing can belaid between layers if desired

This silo block machine is the only one of the kind to be found permitting of making triple reinforced silos and it is only possible to build such silos on "Northwestern" silo block machines.

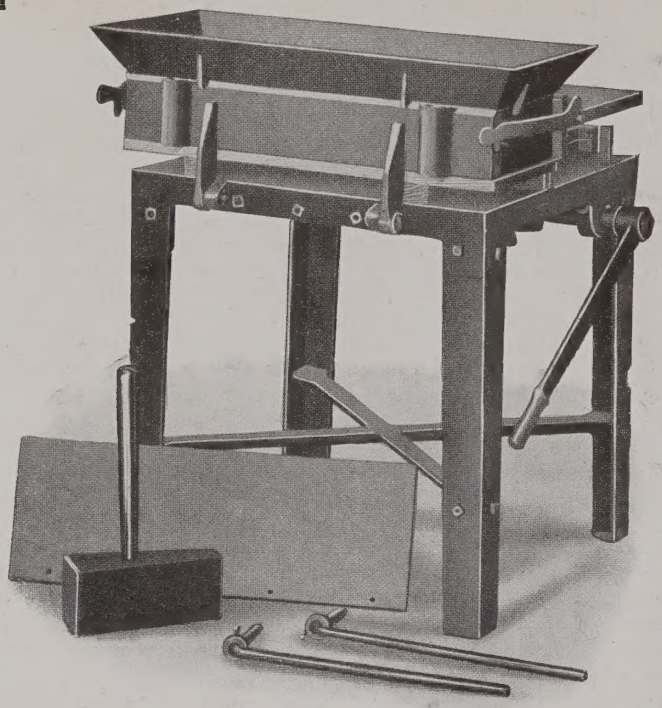
	Price
Northwestern Silo Block Machine, unmounted	$20.00
Northwestern Silo Block Machine, mounted	25.00



All tiers are firmly bound with mortar.



All blocks are dove-tailed together



Ready for Tamping

"Northwestern" TEN BRICK MACHINE

Makes Brick Face Down or Face Up

A SPEEDY, EASILY OPERATED ONE MAN BRICK MACHINE

CONSTRUCTION. The value of a brick machine is not only the output per day, but the quality of the work and the construction and durability of the machine. Some manufacturers of brick machines seem to lose sight of the fact that a machine should be made to stand wear and tear, as well as having a large capacity for production. The "Northwestern" **Ten Brick Machine** is so well made that there is not anything about it to wear or get out of shape in any way. In addition to this it has as large a capacity as an ordinary factory can take care of properly. We guarantee this to be the speediest hand machine made having a capacity from 2000 to 3000 brick per day, just the quantity that can be nicely taken care of and the construction of the machine is such that there will be no expensive repairs or imperfect bricks to discard.

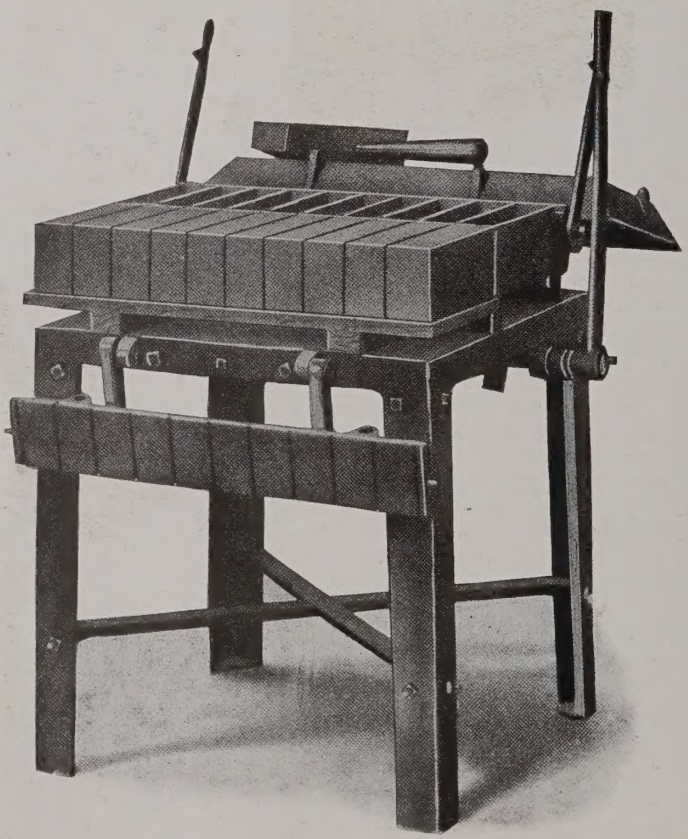
Before purchasing a brick machine we suggest careful consideration of this model. It is made of close grained gray iron castings very heavy, and made with diagonal braces at the bottom; the construction being very firm and rigid throughout. The mould has two heavy one inch machined castings at the front and back and cold drawn steel dividing plates; these dividing plates are machined into the back casting and both the casting and dividing plates are drawn backward by means of a hand lever at the right hand side. The dividing plates enter into ¼ inch grooves in the front casting when the mould is closed, preventing springing from tamping. Back dividing plates are also provided through which the center plates are drawn. These back plates hold the green brick firm and solid while the center plates are moving backward.

Operation. After the hopper is placed, the mould filled and tamped and the hopper again removed, the mould is levelled off. The levers which lock the mould are thrown back, the front plate dropped and one movement of the hand lever entirely draws away the division plates, leaving clear cut perfect shaped brick in just the position that they are stored away for curing.

Pallets. Plain wooden pallets are used and the machine can be adjusted so that different thickness pallets can be used on the machine.

Size of Brick. Standard size brick 2¼x4x8¼ are made and every brick will be the same size, perfect in every respect and having square and sharp corners.

COST OF CONCRETE BRICK. The cost of making concrete brick is about $5.50 per thousand. The comparative cost of clay brick is $8.00 per thousand and as high as $17 is charged for pressed brick. Concrete has every appearance of pressed brick when made on the polished steel pallet. The profits in this line are attractive and every block-making plant should be equipped with such a machine. The making of concrete brick is so easy that they can be made anywhere, saving freight and selling for a higher price than common clay brick. They are justly popular because they are handsome in appearance, cheaper, more durable and better in every respect, becoming harder with age and being indestructible by fire, requiring no expensive firing or machinery. Clay is at its best when first made into brick, chips easily, splits, peels and must be handled with extreme care to avoid a large percentage of breakage. The use of concrete is endorsed by engineers and architects everywhere and is desirable in every way. Our Ten Brick Machine will make as many brick as any plant can take care of and will not require any expensive repairs. Our operators say that masons prefer our brick because they are so easy to lay and make a nice smooth wall. When the masons get to specifying "Northwestern" brick it is time for the block makers to sit up and take notice. A couple of boys will make brick as fast as a mason can lay them and equipped with this machine the contractor, mason, builder or farmer is entirely independent of the brick manufacturer.



Ten Brick in Three Minutes

Write for Special Book of Face Plates

"Northwestern" TEN BRICK MACHINE

A Good Machine for Making Specialties

PRESSED OR FANCY BRICK ATTACHMENT. The making of special and fancy brick for fire places, chimneys, porches, store fronts, houses, etc., offers a line of manufacture in connection with common brick that should appeal to every artisan, whether mason, carpenter or block maker. The sale of fancy brick gives opportunity for individuality in construcion and these products sell for handsome prices. We illustrate ten fancy brick which were made of common sand at one time on this machine. They can be made up in white, black, medium red, bright red, brown, dark blue, gray or marble face. Granite grit can be used and the effect is that of sparkling granite. This material can be purchased for $5.00 a ton. White sand also gives a very beautiful effect. We issue a special book (which tells how to make a great many special faces) which is sent with each machine. When a special facing is desired a few shovels of richer mixture is thrown in first and coarser material can be used for the remainder of the brick, making some very beautiful effects and at no greater price than common brick. The manufacture of special brick brings from $4 to $10 per thousand over the regular price and some very pretty effects can be obtained in fire places, porches, etc., by using combinations of various colors.

SPECIAL FACE PLATE ATTACHMENT. We furnish with each machine described on the opposite page a special face plate attachment which permits of making brick face down and removing them face up. In making fancy or pressed brick a polished iron pallet is furnished on which the brick are tamped. The illustration herewith shows this special attachment swung over with the brick ready to be removed. The iron pallet is above the brick and a plain wooden pallet is on the bottom. This wooden pallet is placed on the top before turning the brick. Only one iron pallet is necessary which is furnished with each machine.

OPERATION. In making fancy brick the mould is closed with the iron pallet on the bed of the machine. The brick are tamped in the regular way. In removing a plain wooden pallet is placed under the two levers over the brick. The brick are then swung over and appear face up resting on the iron levers or stand. The making of pressed or fancy brick requires only one extra operation.

SPECIAL AND FANCY FACES. We can furnish many designs for making ornamental brick and end plates for each. These face plates are dropped into the mould and when the brick are removed the face plates are on top of the brick and can be picked off and dropped in the mould for another lot. Either ten different faces or ten of one or several kinds can be made at one time. It is these specials which bring the largest profits to the block manufacturer and many lumber and coal companies are manufacturing concrete brick for sale in preference to clay brick.

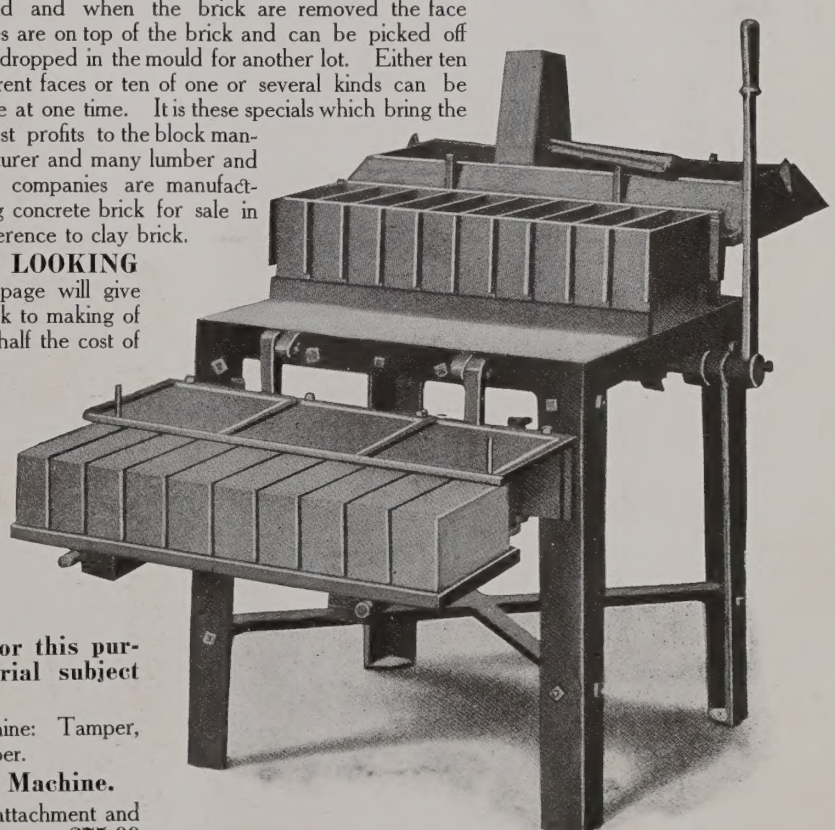
FANCY BRICK MAKE A FINE LOOKING FIREPLACE. The illustration on the next page will give some idea of the beauty and adaptability of brick to making of fireplaces. They can be made cheaply and at half the cost of fancy fire brick generally used for such purposes. The uses to which cement brick can be applied are almost without limit. They are extensively used in arches, bridges, subways, tunnels, retaining walls, pits, sewers, dams, canals, houses, foundations, store buildings, floors, pens, bins, troughs, tanks, ice houses, milk houses, boiler settings, chimneys and many other purposes. The manufacture of concrete brick brings attractive profits and, being made so much cheaper and better, find a ready sale.

No better machine can be found for this purpose. Fully guaranteed and sent on trial subject to return if not satisfactory.

OUTFIT. We furnish with each machine: Tamper, Steel Striker, Sample Wood Pallet, and Hopper.

Prices of "Northwestern" Ten Brick Machine.

Ten Brick Machine, complete with fancy face attachment and outfit, weight 450 lbs.,	$75.00
Ornamental Face Plates, 2 lbs. each,	.50
End Plates, 1½ lbs.	.50



Fancy Brick. Made Face Down, Removed Face Up

"Northwestern" SIX BRICK MACHINE.

A HANDY, FAST, WELL MADE INDIVIDUAL BRICK MACHINE.

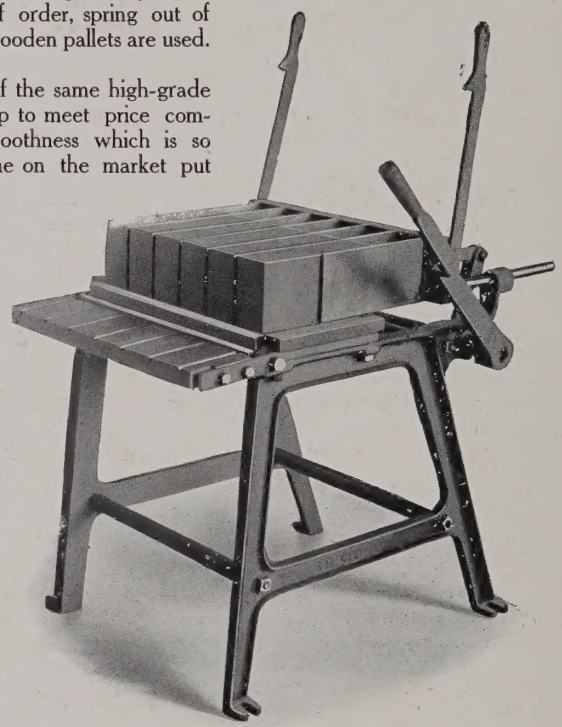
Makes Plain, Fancy, Ornamental, Round or Fancy Corner Brick

CONSTRUCTION. The construction of this machine is of the very best material obtainable and is made of heavy gray iron castings, a mixture of pig iron, steel and wrought iron bearing, carefully graded, producing castings of great strength and stiffness. The frame is heavily braced by rods. The mould for the brick has one inch castings at front and back and one-fourth inch cold drawn polished center and back dividing plates. The center dividing plates are machined into heavy castings and both casting and plates are drawn back and away from the brick by means of a hand lever which has polished steel rods, running in babbitted bearings and drawing the dividing plates away in a perfectly true straight line from the mould. The front casting is hinged and drops down, permitttng of easy removal of the brick. There is not a thing about the whole machine to get out of order, spring out of shape, or cause trouble of any kind. Plain wooden pallets are used.

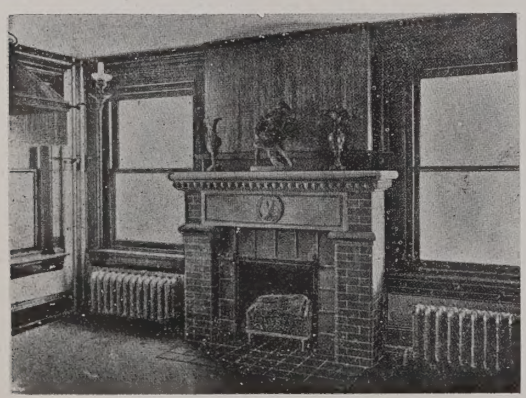
High-grade Material. We absolutely guarantee this machine to be of the same high-grade material and workmanship as our ten brick machine. It is not cheaply gotten up to meet price competition but is carefully machined and adjusted, working with an ease and smoothness which is so characteristic of our larger brick machine. You will not find a six brick machine on the market put out by any one which is as carefully constructed and inspected as this one. Our corps of expert workmen and our large buying facilities enables us to manufacture this machine at a low cost but in the same high-grade way as the larger and more expensive machine and it is sent out subject to trial and return if not satisfactory. It is guaranteed in every detail of construction and defective parts are replaced any time.

Operation. The machine works so easily and smoothly that it has greater capacity than many of the larger and extensive advertised machines on the market. In operating the hand lever is pushed down and two side levers hold the mould together. After tamping, the levers are thrown back, front plate dropped and division plates withdrawn by means of the hand lever. Three operations does all the work and the brick are ready to be removed. The dividing plates finish the brick in much the same way as a trowel and clear cut perfect shape brick are made each time. The dividing plates are so strong that tamping will not spring them and make odd size brick. Regular size brick, 2¼x4x8¼, are made and one man can turn out 1500 to 1800 brick in a day.

Fancy Faces, Corners, etc. We can furnish 10 different face plates and ornamental brick can be made on this machine. The brick are made face down and left on the ornamental plate until set. As a great many fancy brick are not required, a small supply of ornamental face plates could be purchased and as the cost is small, the extra expense is nominal.



Showing method of removing dividing plates.



AN ATTRACTIVE FIREPLACE.
Egg and Dart Coping and Brick made on our Brick Machines.

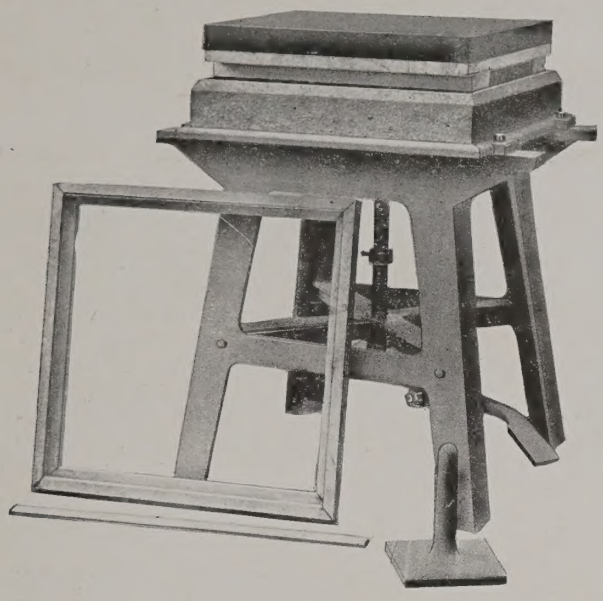
This is a fine Individual Machine. Almost every renter or property owner can use brick. Farmers will also find such a machine of inestimable value and effect a large saving in building various structures—milk houses, hog troughs, walks, feeding floors, hen coops, granaries, water troughs and dozens of different things which can be made at small cost and during spare time. Cement brick are so much cheaper and so far superior to the old fire clay brick that there is no comparison in quality and as they can be made for half the cost of clay brick it is a paying investment to own such a machine.

PRICES:

"Northwestern" Six Brick Machine and Tamper, weight 150 pounds,	$ 30.00
Extra Face Plates,	.50
Extra End Plates,	.50

Fancy Face Plate Book sent on request.

"Northwestern" SIDEWALK TILE MACHINE



Made of Massive Iron Castings and will Last a Lifetime

Make the Blocks Anytime. Store Them Away Like Cordwood. Lay Them Anytime. No Delay to Traffic

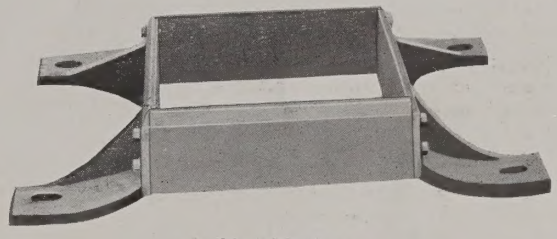
WOODEN SIDEWALKS ARE A THING OF THE PAST. CONCRETE HAS COME TO TAKE ITS PLACE

It is now used in preference to any other material.
It introduces a saving over brick, wood or stone.
It is fireproof.
It makes a nice, smooth walk.
It does not wear out in spots and leave sink holes in walk such as brick.
It does not crack. Sidewalk tile adjust themselves to the heaving of the ground where the temperature is subject to extreme changes.

PERFECT MOULDS NECESSARY. Too much cannot be said about perfect moulds. In order to make perfect blocks, the mould must be planed perfectly smooth and be absolutely true. To fit together perfectly, the blocks must be exact to the fraction of an inch or the walk will have an unfinished appearance and there will be unsightly cracks between the blocks. The most painstaking care must be exercised and the most exact planing must be done to assure perfect blocks. It is work which only the most experienced and best equipped factories undertake, which accounts for the few side walk tile machines advertised (most of which are worthless for practical purposes.)

CONSTRUCTION. Height 2ft. 3in. Base, 2 ft. x 2ft. Foot Lever, 6 in. tread. Size of Blocks (See list of moulds below.)

These moulds are of massive, heavy gray iron castings and are heavier and stronger in proportion to any other machine we make. The *frames* are heavy, solid, firm, rigid and well braced by diagonal castings both at the top and bottom of the frame. We have found that great strength is required particularly in machines for this purpose and that material should not be spared in the construction sufficient to produce heavy, durable frames and moulds which will not spring or get out of true. The weight of the machine without the mould is 200 lbs.



12 inch Mould

CONVENIENT FOOT LEVER. A convient foot lever raises and lowers the pallet. Our experience has been that the only practical way of making these blocks is to press the block up and out of the mould because the heft and weight of the mould itself makes lifting the mould each time out of the question. By forcing the block upward it also smooths the sides of the block in much the same way it is finished on top with a trowel. It makes the machine easy to operate, rapid in action and eliminates all danger of breaking the block in removing.

PALLETS. The Pallets are made of wood and any quantity of them can be made by anyone who can saw a piece of lumber. They are economical to use and easy to make. Iron pallets are expensive; require considerable time in getting new ones from the factory and are too expensive.

OUTFIT. The outfit which we furnish with each machine consists of Base (or frame) complete with Foot Lever Device, Sample Pallet, Steel Screen. Top Dressing Frame and Hopper (or filling frame). Moulds are sold separately.

OPERATION. In making these tiles the operation is as follows: The pallet is put in place and the block tamped with coarse mixture; the hopper is then dropped in place and the face of the block finished with a richer mixture. The hopper is removed, the top of the block smoothed off, the block forced out of the mould with foot lever and is ready to be carried away for curing.

USE ANY SIZE MOULD. These machines are adjustable to any size mould. They are so constructed that the mould can be taken off and any other size fitted to the machine. For instance; if you were using a 20 inch mould and wanted to change to a 24 inch, a few bolts loosen the mould and the change can be made quickly and easily.

CAPACITY. 100 24 in. x 24 in. Blocks or 400 sq. ft. per day.
120 20 in. x 20 in. " " 334 " " " " "
140 18 in. x 18 in. " " 315 " " " " "

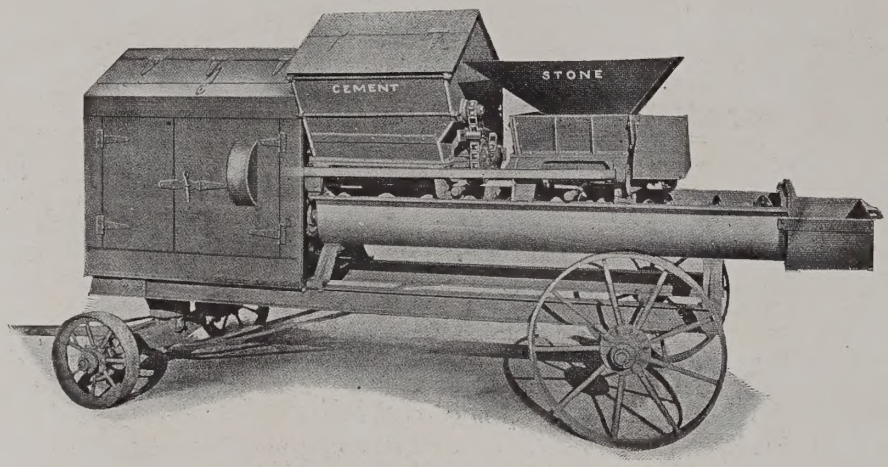
COST OF BLOCKS. The cost of making side walk tile blocks is from four to six cents per square foot for blocks 1½ inch thick; made of 1 to 4 mixture (one part of Portland cement and four of clean sharp sand and gravel) top coat ½ inch of 1 to 2 mixture (one part of cement and two parts of clean sharp screened sand.

Price of "Northwestern" Tile Machine. (Without mould). Weight 200 lbs, Price, - - - **$40.00**

Price List of Moulds. (Square or Hexagon)

SQUARE		HEXAGON	
6 inch	$12	6 inch	$16
8 "	13	8 "	17
9 "	13	9 "	17
10 "	14	10 "	18
12 "	14	12 "	20
14 "	15	14 "	21
16 "	15	16 "	21
18 "	16	18 "	22
20 "	17	20 "	23
24 "	20	24 "	28

"Northwestern" TWIN SCREW RIBBON SPIRAL CONTINUOUS MIXER



Portable Mixer Ready for Operation

The Most Complete Mixer on the Market. Made entirely of Iron and Steel. 3 H. P. "Northwestern" Engine.

Mixes on the Plow or Disc Harrow Plan of Turning Over and Over. Proportions the material accurately. Interchangeable Sprockets for 36 different combinations of mix. Wets it thoroughly to any consistency. High or Low Speed. Runs for months without a repair. Seven feet of mix before delivery.

Does not push or stir the material but thoroughly mixes

The "Northwestern" Twin Screw Ribbon Spiral Mixer is by far the most perfect mechanical mixer ever produced and, barring none, is the most practical and well balanced mixer ever manufactured. Twenty-seven actual, complete mixings take place in one passage through the mixing trough. It does not push the material as a common screw would do, nor does it simply stir it, but turns it over and over on the plow or disc harrow plan and, by means of the twin screw arrangement, it is all mixed into a homogeneous mass with every void positively filled and cement, sand and stone perfectly proportioned so as to produce the most perfect mix possible.

CONSTRUCTION

MOUNTING. The mixer is regularly mounted on I Beam iron skids with steel and cast iron wheels, (tires 3-inch, 18 and 30 inches high, respectively,) heavy borings, large axels and high enough from the ground to permit of placing a wheelbarrow under the discharge end. Wheel base is 43 inches. Axels are equipped with sand collars to prevent dirt from getting in and cuttings the bearings. Heavy bolsters connect the machine to the axle. Either two horse or hand pole is furnished. Mixers can be furnished either mounted on wheels or skids, with or without power and with or without stone hopper. The engine and all gear wheels are entirely housed to protect the working parts from dirt or grit.

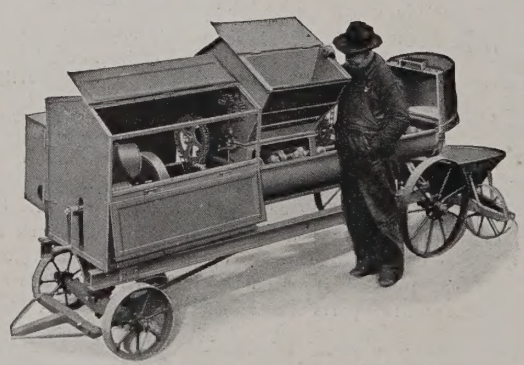
ENGINE furnished with mixer is a 3 H. P. "Northwestern" Air Cooled, high grade engine. Weight 425 lbs. ; bore 4½"; stroke, 5"; Diameter of fly wheel, 2½×18; height, 32½" ; speed, 425 r. p. m. This engine is built on the four-cycle principle and is a smooth running, easy starting, perfect balance engine that pulls steadily and evenly, does the work without effort and jerking and will not become hot under working strain. The engine is furnished complete with all electrical equipment, spark, coil, battery, spark plug, connections, grease cup, lubricators, carbureter and everything necessary to run the mixer. It is all set up ready to go to work and is thoroughly tested and run for necessary length of time to insure all working parts being in perfect condition and under perfect control. The engine is connected directly with the mixer by means of an **inner expansion friction clutch** which is operated by a lever on the left hand side of the mixer. This friction clutch also acts as a **safety clutch** as it will slip when large rock or tools accidentally get into the machine, and eliminates all danger of breakage.

HOPPERS are located at the extreme end of the mixing trough, the cement being on the right side and the sand on the left and directly opposite. The stone hopper is directly back of the others and about the center of the mixer. All hoppers are made of cast iron and heavy cold rolled sheet steel. The capacity of the cement hopper is 3¾ cu. ft. ; sand hopper, 4½ cu. ft and stone hopper, 5 cu. ft.

Hoppers have **Spiral Feed Conveyor Screws** which make the feed positive and continuous (See D and K sectional view next page). Feed Conveyor Screws are made of heavy sheet steel and mounted on a shafting with ⅝ inch studs, double riveted. They are 8 inches in diameter, 18 inches long and driven by sprocket wheel and chain. Hoppers also have paddles which agitate the contents and insure the conveyor screws being full all of the time. Hoppers have a convenient lever for stopping the feed at any time. The mixer has a two speed friction clutch enabling the operator to change to a higher or lower speed according to the material being used.

The stone hopper is provided with a **Friction Roll** (B in sectional view) which is controlled by an **Adjustable Spring** (C) for setting the roll to any desired tension. This friction roll is to prevent clogging and to eliminate unnecessary friction. The adjustable spring permits the roller to adjust itself to the character and size of the stone. This friction roll is the first practical solution of the problem of feeding coarse aggregate in exact proportions and with friction and chance of breakage reduced. Feed screw is conical shape, mounted on shafting, and feeds the stone from the large end of the screw in a continuous, positive, even feed.

Users of this mixer say "it is a great labor saver, thoroughly mixes and, after test, has proven to be absolutely correct in measurement of aggregates, cement and sand."



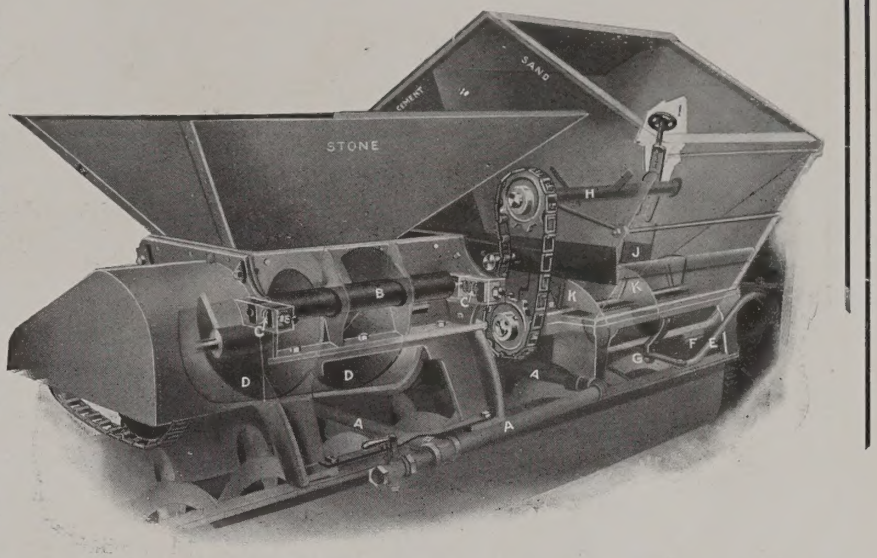
View of Engine and Gearing

"Northwestern" Twin-Screw Ribbon Spiral Continuous Mixer

RIBBON SPIRAL MIXING SCREWS are made of the best quality of bar steel, ¼ in. thick by 1½ in. wide, mounted on heavy steel shafting with heavy steel studs passing through the shafting and riveted through the spiral flights, forming a mixing screw 7 ft. long and 9 in. in diameter. There are twin screws, running side by side and intersecting one another. Each screw makes nine flights or gyrations and the screws (making 18 turns) cuts, turns, laps, mixes, stirs and kneads the contents time and time again in its progress through the 7 ft. of mixing making, (as we have stated before) 27 complete mixings.

MIXING TROUGH is 7 ft. long, 17 in. wide, and 10 in. deep, thoroughly strengthened by reinforcing ribs. It is made of one piece heavy gray iron castings not effected by rust. Hopper or retainer at the end of the mixing trough permits of changing wheel-barrows without loss of time.

CLEANING THE TROUGH is effected by simply tapping the spirals with a hammer, and because of their springy nature, the concrete flakes off. Spirals can easily and quickly be removed by releasing two hand nuts and removing the plate at the end of the trough.

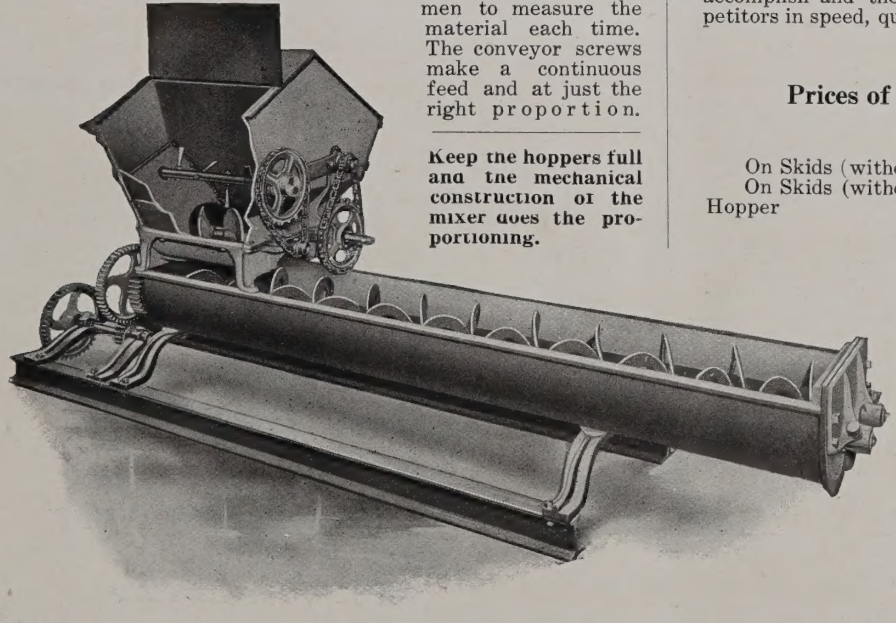


Sectional View of "Northwestern" Continuous Mixer

MIXING. A glance at the sectional view shows how the Feed Conveyor Screws (K) deliver the sand and cement to the extreme front end of the trough in a dry state and in the exact proportions. We furnish 15 different sprocket wheels with each mixer, which enables the operator to make 38 different combinations, viz.: from 1 to 10 of cement and sand, and from 4 to 6 of stone and any combinations of the two. A further variety of mix is made possible by means of the hand wheel which operates slide (J) which increases or lessens the size of the opening. When the cement and sand is delivered to the mixing trough it already has had an initial dry mix in the Screw Feed Conveyor. It is further mixed dry in the trough until it reaches the end of the first hopper where water is supplied by means of a perforated pipe (A) which runs across the trough and insures even distribution of the moisture. This pipe also runs across the trough back of the stone hopper supplying water also after the rock has been added. Connection can be made with tank, or hydrant of any kind.

CAPACITY is 75 to 85 cu. yds. per day and can be pushed to greater capacity with proper handling. Only enough men are necessary to keep the hoppers filled. There is no stopping the machine waiting for men to measure the material each time. The conveyor screws make a continuous feed and at just the right proportion.

Keep the hoppers full and the mechanical construction of the mixer does the proportioning.



Mounted on Skids, without Power. Notice the Agitating Paddle in Hopper to Prevent Clogging

THE RIBBON SPIRAL TWIN SCREW MIXER is one that has been brought to its present state of perfection after long study and test and is so nicely balanced that a man can turn it easily without a load. The first improvement was in overcoming the clogging of the hoppers which we did by means of conveying screws and also by the agitating paddle. The next improvement was the feed device in the stone hopper, eliminating danger of breaking the feed screw because of the uneven size of the stone. This was accomplished by means of conical shaped screw which gives the material more room the farther it travels, the friction being eliminated by means of frictional roll and set screws, and the stone being fed in proper proportions.

The last and best point of perfection was a combination which would combine all of the good qualities of all other continuous mixers and we believe that the Ribbon Spiral Screws accomplish this, turning it over and over, lapping the mix from one side into the other, stirring it thoroughly, kneading it like dough in the mixing machine and, in its progress down the trough, pulling it apart and cutting it time and time again like a candy puller. The satisfaction of our customers is giving this machine a greater boost than any amount of advertising could accomplish and the "Northwestern" outpasses all of its competitors in speed, quantity and quality of mix.

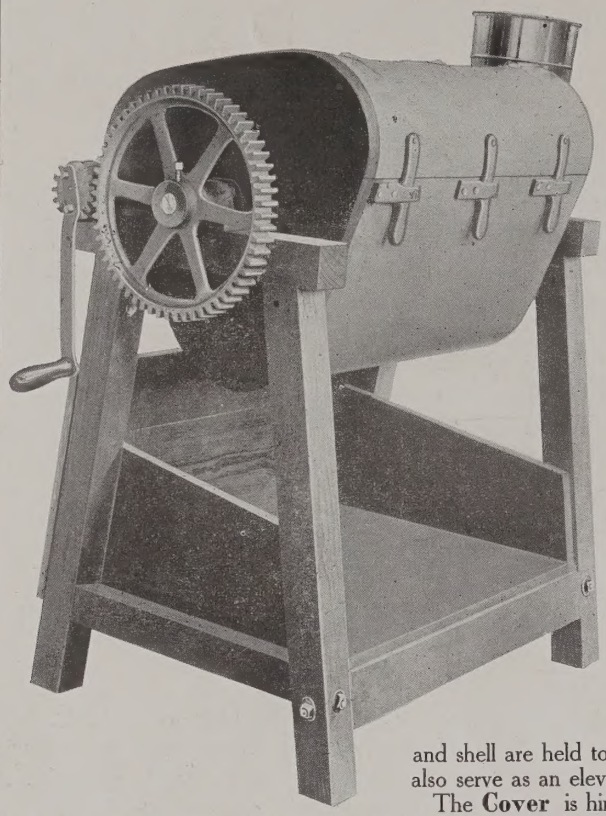
Prices of "Northwestern" Ribbon Spiral Twin Screw Mixer

On Skids (without engine) with Sand & Cement Hopper.
On Skids (without engine) with Sand & Cement and Stone Hopper

On Skids with Engine with Sand and Cement Hopper.
On Skids with Engine with Sand and Cement and Stone Hopper.
On Wheels (without engine) with Sand and Cement Hopper.
On Wheels (without engine) with Sand and Cement and Stone Hopper.
On Wheels with Engine with Sand and Cement Hopper.
On Wheels with Engine with Sand and Cement and Stone Hopper.

Fully guaranteed and any defective parts replaced Free. Any part broken in transit replaced Free.

PRICES ON APPLICATION



"Northwestern" Triangular

Hand and Belt Power MIXERS

The Most Practical, Thorough, Rapid and Handiest BATCH MIXER Made

Mechanical Mixers are Best. They Save Time, Labor and Money

Modern Methods Require Modern Machinery. "Northwestern" Mixers are Replacing the Mortar Box and Hoe

Batch Mixers Pay for Themselves in a Few Days. Just figure the Time of five or six Men a Day against the time of One Man, or one man and a few gallons of gasoline.

Construction of Hand Mixer. The Hand Mixer consists of Frame, Drum, Gearing, Water Tank and Wetting Device. **Frames** are 3 x 3 inch wood bolted together with long rods and built in hopper form at the bottom to hold the mix after it is dumped from the drum. The **Drum** is made entirely of steel and is triangular shape with rounded corners. The **Shell** is made of 14 guage cold rolled steel and fits into grooves in either drum head. The **Drum Heads** are made of heavy castings and grooved on the inside. The drum head and shell are held together by four long half inch rods running entire length of the drum which also serve as an elevating device to carry the material well up on the side before it drops.

The **Cover** is hinged to the drum and fitted with three latches which slide into place and lock the cover. The left hand drum head has a cold rolled steel journal chilled to the center, which turns in a solid box on the frame and the gear wheels are fastened to this journal. The **Power** is produced by a four-to-one set of gear wheels with a 30 inch sweep of the crank. The right drum head is a cast journal and is perforated to permit a pipe to run through it.

The **Wetting Device** consists of water tank, which is fastened to a stand on the frame. Connected with this tank is a half inch pipe which runs through the journal and extends clear across the center of the inside of the drum head. This pipe is perforated and the water is regulated by a half inch globe valve. This method evenly distributes the water through the drum and eveness of moisture assured.

Construction of Belt Power Mixer. (Illustrated on next page.) The construction of this mixer is similar to the Hand Mixer but is larger and more powerful. The **Frame**, instead of being made of wood is heavy iron castings with steel hopper at the bottom. The **Power** is transmitted through an iron pulley. It is also equipped with loose pulley for throwing off the power at any place for emptying. It has greater capacity and is an all-round bigger machine. In ordering Belt Power Mixers state what size pulley is wanted or the number of revolutions per minute of the engine and size of engine pulley.

Specifications of Hand Mixer. Length of drum, 30 inches; circumference, 72 inches; diameter, 23 inches; height over all, 4 ft. 4 in.; length over all, 4 ft. 2 in.; capacity 3 to 4 cu. ft; capacity of hopper bottom, two batches of 3 cu. ft. each; speed 15 revolutions per minute.

Specifications of Power Mixer. Length of drum, 36 in.; circumference, 84 in.; diameter, 26 in.; height over all, 4 ft. 6 in.; length over all, 4 ft. 8 in.; capacity 5 to 6 cu. ft.; capacity of hopper bottom, two batches; speed 15 revolutions per minute.

CONSTRUCTION AND WORKMANSHIP. The construction and workmanship of these mixers is the best that can be produced. Many designs and styles of batch mixers have been tried out but the triangular drum stands at the top for perfection in mix and speed in operation You get the **most concrete** in the **shortest time** and "Northwestern" Batch Mixers have no equal. One of the most important items to consider in batch mixers is the wear and tear on the machine. Where the contents of a mixer, weighing some two or three hundred pounds, is continually being dumped from end to end or thrown a long distance the wear and tear is terrific and the machine soon looses its usefulness, gets woobly, loose in gears, of no use as a time saver and imperfect in operation and quality of mix. With the triangular drum, the material is raised about 20 inches and thrown in a shower to the next side of the drum. The contents do not strike this side in a straight line but in a diagonal direction losing its force and reducing the strain on the drum head. Four long rods which hold the drum head and shell together act as elevators and carry the material well up on the opposite side.

EASY TO CLEAN, SPEEDY IN OPERATION. Tired men are not very thorough in cleaning up a machine at night and a dirty mixer is a bad thing to start a day's work with. With the "Northwestern" Triangular Batch Mixers, a little water turned into the drum and revolved a few times will do the work. A wash run in after the last batch is run through cleans the mixer and leaves it in good shape. "Northwestern" mixers are easy to operate. A convenient door opens at the angle of the drum and three latches hold the door shut when revolving. The hand mixer can be turned in either direction. With either mixer, the drum can be loaded at either side most convenient to the operator.

MECHANICAL MIXERS ARE BEST. The old mortar box and the hoe is fast being replaced by mechanical mixers and the demand for such machines has produced hundreds of mixers of all shapes and at all prices. Like everything else, there is **one best** and **many imitations.** Some of these machines have merit, but for the most part they are simply "made to sell" and a bill of expense to the operator.

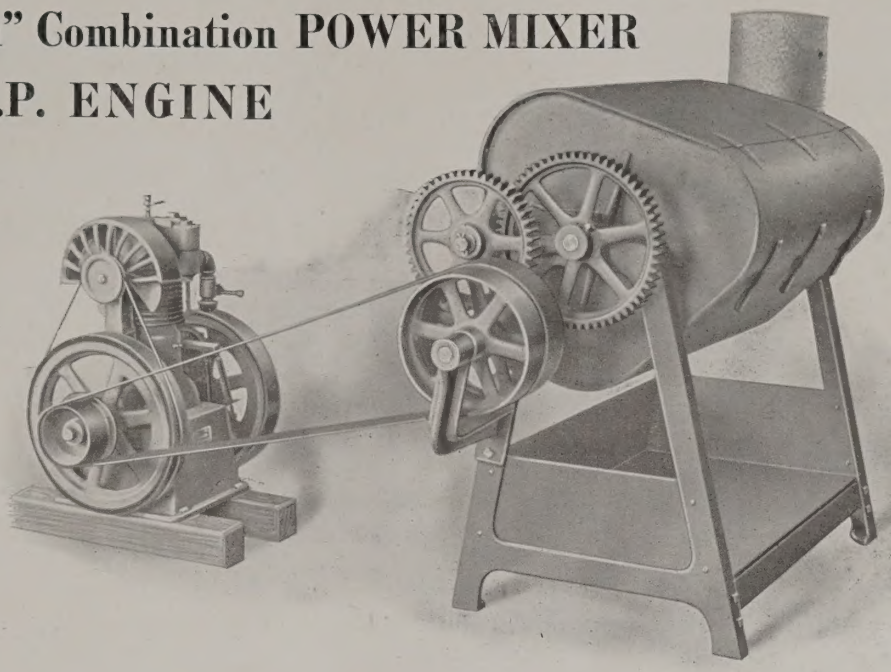
We Guarantee these Mixers to be Perfect in Construction, Simple in Operation and Perfect in Mix.

Price of Mixers	"Northwestern" Hand Mixer, weight 275 lbs.,	**$ 45.00**
	"Northwestern" Belt Power Mixer, weight 400 lbs.,	**85.00**
	"Northwestern" 3 HP. Engine and Belt Power Mixer, weight 900 lbs.,	**175.00**
	"Northwestern" 3 HP. Engine and Power Mixer mounted on separate trucks	**210.00**

"Northwestern" Combination POWER MIXER and 3 H.P. ENGINE

Earns large profits
Easily operated
Economical in cost
Opens a large field
Simple construction
Guaranteed in detail

Mounted on Separate Trucks and Low Wheels Makes a very desirable outfit for sidewalk builders.



Equipped with this Engine and Mixer means successful competition, large returns and gratifying profits. It means the beginning of a successful business to the energetic man. A mixer can be used in every field of concrete manufacture, whether laying side walks, making blocks, building piers, foundations or any other structure or article made of concrete. To own a "Northwestern" means to get the business and to furnish the best concrete.

With this outfit we furnish the belt power mixer illustrated here and described on the opposite page. It is a large powerful mixer with a capacity of from 5 to 6 cubic feet, the bottom of the frame made in hopper form of sheet steel and large enough to hold two batches. It is only 4 feet 6 inches high over all and very convenient and handy to load. The capacity of this engine and mixer is from 25 to 30 cubic yards in ten hours. Either slush, semi-dry or dry mixture can be turned out and it requires less than a minute to thoroughly mix one batch. The mixer has a 12 inch loose and tight pulley and is geared to run 15 to 20 revolutions per minute; 8, 10 or 12in. pulley can be furnished; leather or rubber belting can be used. The mixer can be stopped at any point or angle for unloading.

PORTABLE AND SEPARATE ENGINE AND MIXER. One of the very best features of this outfit is the separate engine and mixer. There is much merit in having these two separate and this mixer is the result of an insistent demand for separate engine and mixer. With a separate engine it can be used for any purpose to which a stationary engine can be put and therefore this feature alone recommends the purchase of such an outfit. Both engine and mixer are portable and can be moved from place to place. They can be mounted on skids or low trucks at small additional cost, though we ship separate and as illustrated.

"Northwestern" ENGINES ARE LIKE RELIABLE DRAFT HORSES--STEADY, TRUE PULLERS; SETTLE DOWN TO A LOAD WITHOUT JERKING; ALWAYS READY, WILLING WORKERS.

We make our own engines and have an especially equipped department devoted to the exclusive manufacture of these engines. A special engine catalog will be mailed on application. Our engines are not built solely to meet price competition but are of the very highest grade of workmanship and material throughout. Each engine is subjected to thorough test and inspection and is fully guaranteed. The engine will develop full 3 H. P. and is air cooled to avoid danger of freezing and cracking the cylinder. It is an all-the-year-round machine. The cylinder is cast with flanges surrounding both sides and heads which serves to strengthen the cylinder. A fan, driven by a round belt from the fly wheel, forces a circulation of cooled air around the cylinder. The shaft and connecting rod are of forged steel. All moving parts are carefully machined and polished to size. Fly wheels are heavy and well balanced. The engine is equipped with governor. It is furnished complete with lubricator, muffler, gasoline tank, all electrical connections, coil and plugs. The engine is provided with electrical ignition using the jump spark system, avoiding the many complicated parts and adjustments used in the "make and break" igniters. Plug, coils and all renewals for jump spark ignition can be secured at small cost in any town where automobile supplies are sold.

Guaranteed to Start Easy, Govern Well, Develop Rated Horse Power, Run Smoothly and Do A Full Days Work.

PORTABLE OUTFIT

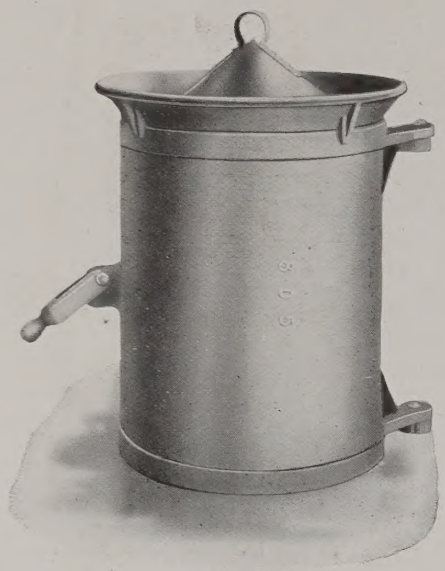
Engine and Mixer, mounted separately on low trucks with cast wheels and hand tongue, price complete, - - - - - **$210**

STATIONARY OUTFIT

Price of Combination Engine and Mixer.
As Illustrated and Described

Price, (without belt) - - **$175**

CATALOG AND PRICES OF 2 TO 12 HP. ENGINES ON APPLICATION.



Complete Mould Ready for Tamping

"Northwestern" Two-Piece Hinged SEWER AND DRAIN TILE MOULDS.

Simple - Efficient - Rapid - Practical - Durable

BIG RETURNS FROM SMALL INVESTMENT.

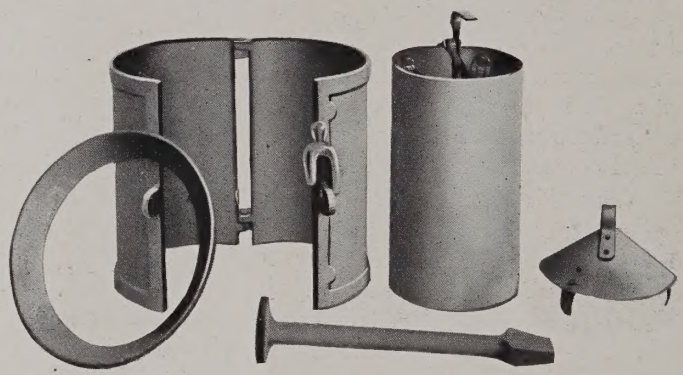
Only one mould necessary. Six inch Tile made for 4c per foot, sells for 17c. Use plain wooden pallets.

NO EXPERIENCE NECESSARY.

CONSTRUCTION. "Northwestern" Two-Piece Hinged Tile Moulds consist of outer shell, inner core, core top, hopper and tamper. Moulds are made in sizes as shown under prices. The *Outer Shell* is made of heavy cast iron in two sections which are hinged together on one side and locked with a simple automatic "U" shaped lever on the other. The heavy cast iron shell eliminates all danger of the shell spreading from tamping, and perfect shaped tile result. The core is collapsible and made of sheet steel having six automatic levers on the inside controlled by a single lever at the top which expands or contracts the core by raising or lowering it.

OPERATION. The operation of these moulds is very simple and perfect moulds are made each time. Anyone, without any previous experience whatever can operate them. The outside shell is closed and locked; the core is placed; the mould filled and tamped; the core contracted and removed; the outer shell opened and the tile stands perfect in shape and symmetrical in form. The core is held the proper distance from the shell by small blocks or nails driven in the pallet.

WOODEN PALLETS USED. Iron pallets are expensive and our moulds are built to eliminate all unnecessary expense. Iron pallets are unnecessary when using our moulds. The cost of 120 to 200 iron pallets (enough for a day's run) would be many times the value of the mould and this money could be used to better advantage in increasing the varietyof size moulds.

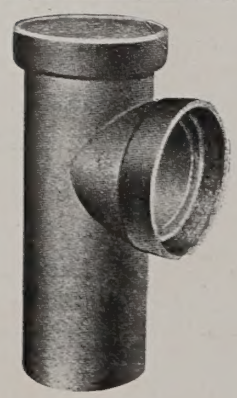


View of Parts

ONLY ONE MOULD NECESSARY. The plan of using ten moulds for ten tile is absurd; too expensive for competitive purposes or personal use, and an unnecessary expenditure of money. Use one mould for any number of tile and not 100 moulds for 100 tile. The capacity of one of our moulds is 120 tile for a crew of three men. An investment in 120 moulds of other makes would mean from $1000 to $2000 invested in moulds as compared with the price of *one mould* of our make.

BIG OPPORTUNITIES IN CONCRETE TILE. Concrete Tile is the most practical, durable, economical and desirable form of tile. It is recommended and endorsed by engineers and all authorities because of properties which enable it to resist the effects of rain, heat, frost and all extremes in temperature. Clay tile, when exposed, splits, peels off and quickly disintegrates, necessitating frequent replacement. Concrete, on the other hand, gets better with age and it has been found under test that the hardening process continues for 8 to 10 years. It can be manufactured for about one-fourth of the cost of clay tile and it is far ahead in quality. The manufacture of concrete tile is the most attractive field in concrete manufacture and the cost of a start is small. A small investment will start a business with wonderful opportunities and gratifying profits. As soon as a few tile are manufactured and people learn that they can secure such tile, the orders will come without solicitation and in large numbers.

"Y" AND "T" JOINTS. The making of Ts and Ys is very simple and easy. These specials always sell at a handsome profit and do not require any additional attachments. They can be made from regular stock tile Send for book which tells how to make these joints.



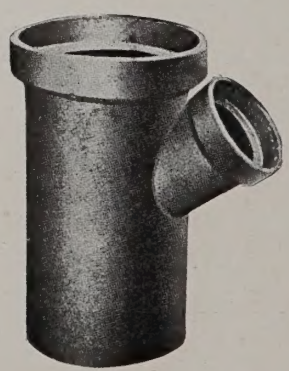
"T" Joint

Capacity of Moulds. The following figures show the *capacity per hour* of "Northwestern" Tile Moulds based on a team of three men. These figures are not "stretched" to fit the case but are the actual output of factories using our moulds with ordinary men working ten hours a day.

Size	4 in.,	16 per hr.	Size	10 in.,	9 per hr.	Size	20 in.	6.5 per hr.
"	5 in.,	15 "	"	12 in.,	9 "	"	24 in.	6 "
"	6 in.,	12 "	"	15 in.,	7.5 "	"	26 in.	5.5 "
"	8 in.,	11 "	"	16 in.,	7.5 "	"	30 in.	4 "
"	9 in.,	10 "	"	18 in.,	7 "	"	36 in.	3.5 "

Prices of "Northwestern" Two-Piece Hinged Tile Moulds.

6	inch	core,	1	inch	thick,	Length	12	inches	Wgt. 45 lbs. **$12 00**
8	"	"	1⅛	"	"	"	14	"	" 65 " **13 00**
10	"	"	1¼	"	"	"	16	"	" 95 " **14 00**
12	"	"	1⅜	"	"	"	18	"	" 125 " **15 00**
14	"	"	1½	"	"	"	20	"	" 155 " **17 00**

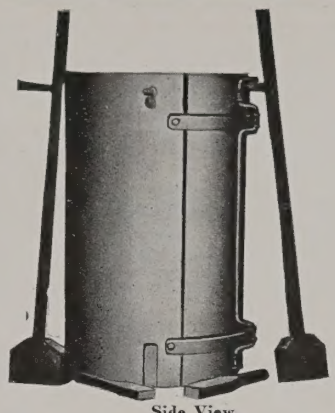


"Y" Joint

"Northwestern" EXPANSION DRAIN and SEWER TILE MOULD

Guaranteed to Do the Work and Stand the Test

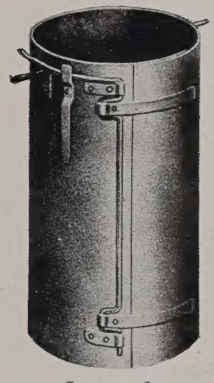
Perfect and Simple in Operation. Rapid and Practical in Action. Thirty Days Trial, Subject to Return if not Just as Represented.



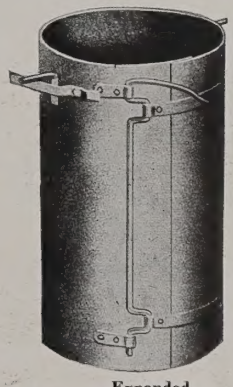
Side View

The "Northwestern" Expansion Tile Mould is made on the expansion plan of both inner and outer shell. It differs from our Two-Piece Tile Mould in that the outer shell is made of one piece sheet steel instead of two pieces. This mould is also made in longer lengths, having a larger capacity per day and greater adaptability to the making of special tile such as Bell End, and Bevel and Tongue.

CONSTRUCTION. "Northwestern" Expansion Tile Moulds consist of One-Piece Outer Shell, One-Piece Inner Shell (or core), Hopper, Core Top, Tamper and (for 15 inch or over) Lifting Bar with Hooks. Outer Shell is made of one piece high carbon sheet steel varying in thicknes for the different size moulds. Sheet steel is rolled into circular shape and held in this position by means of eccentric levers, which is in turn controlled by a gravity lever for opening or closing the mould.



Contracted



Expanded

Outside Shell

The operation is very simple. By simply raising the gravity lever the eccentric levers are released and the spring quality of the sheet steel expands the shell. At the top of the mould convenient handles permit of removing the shell easily and without danger of breaking. It is the steadiness of the releasing principle that makes this mould so easily and successfully operated. Outer shell can be promptly removed and without the slightest jar to the fresh cement.

The Inner Core is also made of one piece high carbon steel. The contraction of the core is by means of a Toggle Joint Lever operated with a hand wheel, or in other words the core has levers at the top and bottom fastened to a verticle center rod which draws the top levers down and the lower levers up in the contracting process. The illustrations herewith show how this lever operates by simply turning the hand wheel to the left. It is the nicest, smoothest and most even contracting device ever invented and works just as easily in a mould with a ten foot diameter as it does in a four inch diameter. No block factory is complete without these Expansion Moulds.

WE SPECIALIZE IN TILE MOULDS.

Every ingenuity and mechanical device is used to produce the very highest quality of tile moulds. We do not spare expense in producing *good* goods. Our corps consists of expert men, all paid to produce the best that brains and machinery can make. The capacity of "Northwestern" tile moulds is the greatest possible and it is not necessary to purchase a quantity of moulds for one day's run, as is necessary with many other makes. For straight tile only wooden pallets are used and we do not recommend the use of expensive iron pallets because of the considerable extra expense.

"NORTHWESTERN" TILE MOULDS FREE FROM CRITICISM.

It is not often that human effort is crowned with complete success, but in the Expansion Tile Mould we have produced a machine without one complaint and entirely free from criticism.

Comparative Cost of Concrete and Clay Tile.

We give below the comparative cost of making regular sizes of the very best indestructible concrete tile in both Straight and Bell End and also comparison with the best quality of Vitrified Clay Pipe.

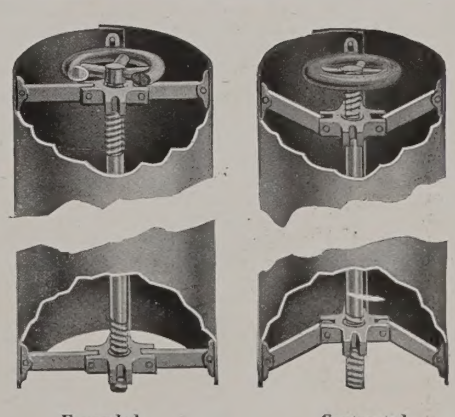
These figures are based on a 3 to 1 mixture of concrete and figuring sand at 75 cents per yard, labor $2.00 per day and cement $2.00 per barrel.

It pays to make Concrete Tile. Saving in Concrete of 300 to 500 per cent.

SIZE *inches*	THICK *inches*	STRAIGHT *per foot*	BELL END *per ft.*	BELL END Vit'fd. Clay *per ft.*
4	¾	$.028	$.05	
5	1	.047	.054	$ .14
6	1	.05	.07	.17
8	1	.066	.086	.23
9	1⅜	.0785	.0962	.26
10	1⅜	.087	.115	.30
12	1½	.12	.155	.375
15	1⅝	.154	.192	.543
16	1⅝	.162	.205	.60
18	1¾	.172	.237	.789
20	1¾	.205	.255	1 008
24	2	.276	.343	1.45
26	2	.315	.385	1.65
30	2½	.393	.443	2.10
36	3	.51	.575	2.75

Prices of Northwestern Expansion Tile Moulds
(Inside Measurements)

SIZE *inches*	LENGTH *inches*	WEIGHT *lbs.*	PRICE
4	18	20	$20 00
5	18	25	21 00
6	18	34	21 00
8	18	44	22 00
9	2ft	55	23 00
10	2ft	70	24 00
12	2ft	90	26 00
14	2ft	95	29 00
15	2ft	100	29 00
16	2ft	125	31 00
18	2ft	141	31 00
20	2ft	160	34 00
24	2ft	180	39 00
26	2ft	200	44 00
30	2ft	263	49 00
36	2ft	333	54 90
42	Tile Machine		
48	" "		
60	" "		

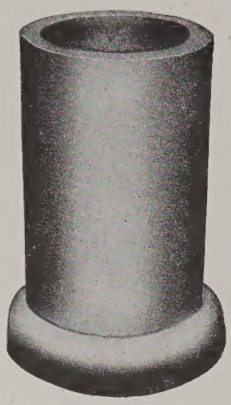


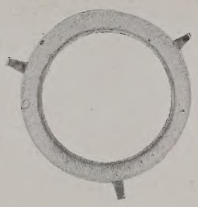
Expanded Contracted

Inner Shell or Core

"Northwestern" BELL END and BEVEL AND TONGUE ATTACHMENTS

For Expansion Tile Moulds





BELL END ATTACHMENTS.

Bell End Attachment

Bell End Tiles are extensively used in various sections and the manufacture of such Tile is not only easy but very profitable and successful. The old style fire brick tile warp so in making that their cost is naturally high because of so many imperfect ones having to be thrown away.

TONGUE AND BEVEL ATTACHMENTS.

There is practically no competition on these tile and anyone can make them on our moulds. The method is simple and almost as many bell end tile can be made as straight ones. The ring pallet is placed on a common wooden pallet and the material tamped into the bell. The ordinary mould is placed on the ring pallet and held in place by means of a special collar and tamped in the regular way. Only one Ring Mould but a supply of Ring Pallets would be necessary for a days run as the tile must be left on the ring mould until after the initial set Detailed instructions sent on request and also with each machine.

PRICES OF BELL END ATTACHMENT.

Size	Casting Outside Bell	Casting Inside Bell
4 in.	$ 1 75	$ 75
5 in.	2 00	75
6 in.	2 00	75
8 in.	2 50	75
9 in.	3 00	75
10 in.	3 00	75
12 in.	3 00	95
14 in.	4 00	1 10
15 in.	4 00	1 10
16 in.	4 50	1 25
18 in.	4 50	1 25
20 in.	5 00	1 35
24 in.	6 00	1 65
26 in.	7 00	2 00
30 in.	7 50	3 50
36 in.	9 00	4 50

PRICES OF BEVEL AND TONGUE ATTACHMENT.

Size	Top Ring	Bottom Ring
4 in.	$ 80	$ 50
5 in.	80	50
6 in.	80	50
8 in.	80	50
9 in.	85	55
10 in.	90	60
12 in.	95	65
14 in.	1 00	75
15 in.	1 05	80
16 in.	1 10	85
18 in.	1 20	90
20 in.	1 30	1 00
24 in.	1 50	1 15
26 in.	2 00	1 50
30 in.	2 25	1 90
36 in.	2 90	2 55
42 in.	3 75	3 25
48 in.	4 75	4 10
60 in.	6 00	5 25

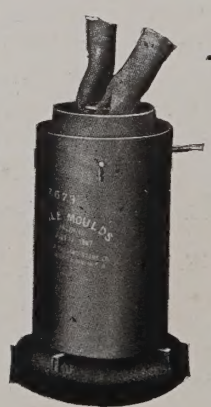
Tongue and Bevel Attachments

We recommend the purchase of Tongue and Bevel attachments for Expansion moulds. This kind of tile is quickly made and the attachments are not expensive to own. The Bell End idea originated in Europe years ago and before cement tile was thought of. The clay tile were generally so warped that a large bell end was necessary to make a fit. As soon however, as cement came into vogue for use in making tile, the fact became apparent that a tongue and bevel end would answer the purposes in a great many cases and this attachment is the result of a change due to new ideas and new methods of manufacture. The cement tile are perfectly straight, fit snugly and in practically every case answer the purpose of the bell end. When cemented together they make continuous, indestructible conduits and desirable in every way.

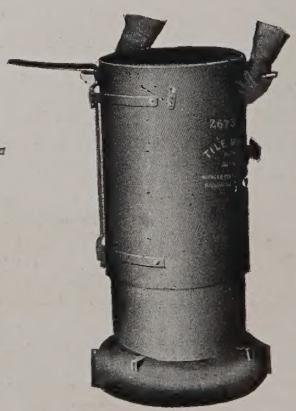
In making Tongue and Bevel tile the Tongue is placed in the mould and tamped in the regular way; after the mould is struck off the bevel is turned around several times on the mould to form the bevel and taken off. The bottom tongue must be left on the mould until the tile can be turned on its side for removing the tongue. A supply of tongues would be necessary for a day's run but only one bevel.

Tamping Bell End.

Straight Mould Attached.

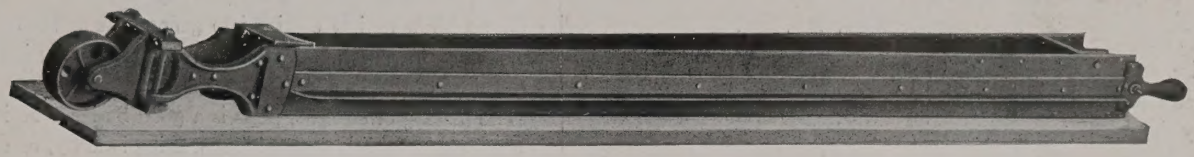


Removing Core.



Removing Shell.

"Northwestern" ONE-MAN FENCE POST MOULD



Moves Like a Wheelbarrow.

Makes Everlasting Posts at Economical Cost.

Never Decay—Not affected by Fire, Frost, Wind or Insects.

It is designed entirely on new ideas with distinctive qualities which recommend its use everywhere. It is distinctly a *One-Man* mould. The change in position can be made with no more work than changing a wheelbarrow from one position to another and with no more exertion. When two men are operating it this mould can be lifed from one position to another the same as any other, but the wheel bearing is distinctly our own invention.

OPERATION.

The mould is locked by means of a latch at the foot, and a block for the top is slipped in place and the post is tamped. Reinforcing can be inserted at any time when tamping. The mould is released by unlocking the latch and raised by means of handles at the end. The mould is pushed forward a few inches, tilted over a little and pulled back in position for another post. Everything is easily and quickly done and we guarantee this to be the speediest and easiest moved machine and the only one moved on the wheelbarrow plan of roller bearing.

ADJUSTABILITY.

We particularly call attention to the adjustability of this Post Mould. We illustrate a view of both ends to give a clear idea of this feature. It has six holes in the casting at the head of the post and by changing the bolts, posts can be made 2½, 3, 3½, 4 and 4½ inches wide at the top, making it possible to make either straight or tapering posts and any width. The mould has two screw bolts with lock nuts at the bottom and a latch holds the mould shut. It has an expansion of 3 inches making posts any width from 3½ to 6 inches at the base. Change in size is quickly and easily made by changing the bolts at the top and turning the screws at the bottom.

SIZE OF POSTS.

In addition to making posts any size from 3½ to 6 inches at the base and from 2½ to 4½ at the top, it is adjustable to different lengths, making posts 6, 6½, 7, 7½ and 8 feet long and 4 inches thick. We illustrate a number of posts made on this mould.

Becomes Harder and More Durable with Age.

We have the Only Original One-Man Post Machine made.

CONSTRUCTION.

The sides of the mould are made of ¼ inch iron, re-inforced with 1 inch angle iron to prevent spreading of the mould. Adjustable clamps are also used to further prevent any spreading. The handles, wheel and head are heavy castings securely bolted to the sides. The mould is built medium weight, and heavily reinforced so one man can handle it easily.

SPECIAL AND FANCY TOPS.

The top of the post is formed by slipping in place a hardwood block which can be made square, round, oval, bevelled, pyramid, Roman or any other shape desired. Anyone can make these to suit their own taste. When post is tamped and mould moved, this block is picked off from top of post and slipped back into place in the mould. We have arranged our post mould purposely in this manner so our customers can suit themselves as to design of post. For lawn fences in country residences, clubs, etc., any initial or monogram can be used, while if only a plain top is wanted, a square block made from an ordinary 2 x 4 scantling will answer the purpose.

MAKE THEM ANYWHERE.

No pallets or stand of any kind is necessary for this mould. You can make them on the barn floor or any place where they can remain until set. Nothing special is required and the barn floor, granary, or any place having level floor will answer the purpose.

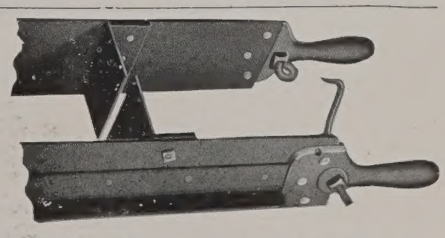
METHOD OF FASTENING WIRE TO POSTS.

Any method used by other post moulds can be used in the "Northwestern" but we furnish a tool for forming a staple of any common soft wire. These staples are inserted into the soft concrete with the ends protruding about one inch. As fence wire is stretched on posts these ends are slipped over same, and with a twist the wire is locked in place. It is the most economical and practical method known. We make no charge for this tool to purchasers of our post moulds, to others the price is 75 cents.

Showing Roller Bearing Front and Method of Adjustment

These two adjustable features and the roller bearing front makes this mould far ahead of anything ever invented.

Prices on following page.



Notice the Handles for Moving and the Latch for Locking. Adjustment is by means of Screw Bolts

"Northwestern" ONE-MAN FENCE POST MOULD

REINFORCING.

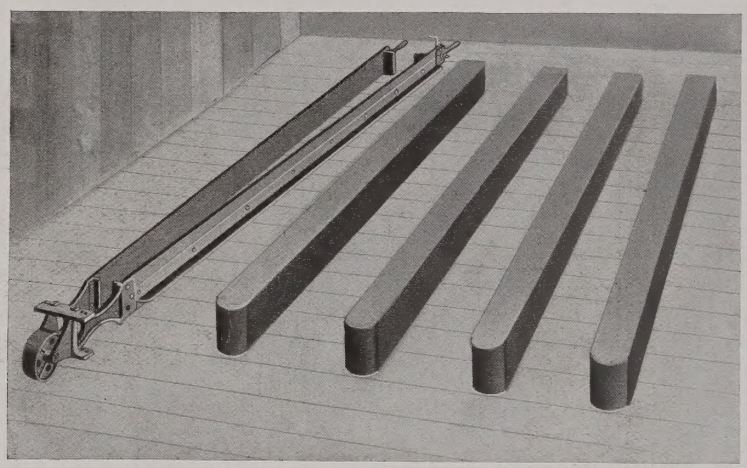
There are a number of ways of reinforcing the posts. Barb wire, straight wire, hoop iron, angle iron or old iron rods can be used and in using an open mould such as this they can be inserted any time while tamping. Reinforcing is an easy matter with our mould.

COST OF POSTS.

A 7 ft. post, 3 inches at the top and 5½ inches at the bottom, costs from 12 to 15 cents each and readily sell for twice that amount.

There is not one objection that can be raised against concrete posts and they can be made during spare time and rainy days. In the *one man* mould you get the easiest moved, most adjustable and least expensive post machine made. Only a few years ago such things as indestructible posts were unheard of. Iron is expensive, wood rots and is destroyed by fire and worms. Concrete posts are rapidly coming into general use and today are very common and generally adopted by the most progressive people in all sections of the country.

The making of concrete posts is a good business in itself or it is a profitable branch to any block making industry, or the moulds can be purchased by farmers and property owners and the posts made any time. They add beauty to any place when once set; make a solid foundation for the wire, not affected by the heaving of the ground. Fire does not affect them and the weeds can be burned along the fence without any injury whatever to the posts. They also act as lightning arresters, saving valuable stock. Concrete posts will be appreciated by the man who, from year to year, has an endless task of replacing broken or rotten posts, especially in view of the fact that they can be made for about the same price as cedar posts.



POST MOULDS.

There are a great many post moulds manufactured but they are either large, heavy and very cumbersome affairs, (invariably requiring a large expenditure of money) or it takes two men to operate them. Poured posts are objectionable because so much equipment is necessary as only one post can be made each day with one mould and further because when the concrete is poured too wet, the cement and particles wash and separate, making an inferior post. One mould of our make will produce fifteen times the number of posts in a day at one-tenth the investment, besides reinforcing is an easy matter, avoiding all the trouble incidental to placing re-inforcing in poured moulds.

Price of "Northwestern" One-Man Post Mould, **$ 20.00**

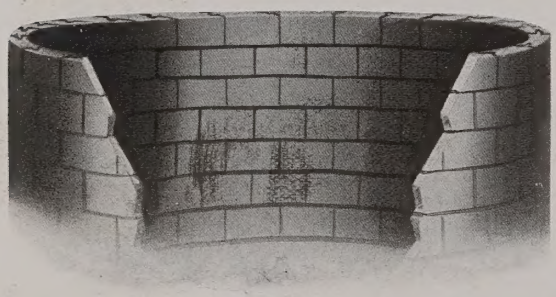
"Northwestern" WELL CURBING MOULD

Keeps the Water Pure and Sweet
Prevents Caving and is Everlasting

The public has long been demanding some sort of material for well curbing which will not rot and allow caving. It is an expensive, dangerous and unpleasant task to replace old, rotten curbing and worse to repair stone. Wood lasts no time at all and stone soon loses the mortar and caves in.

The peculiar properties of cement enables it to become harder and more durable the longer it sets in water and makes a material especially adapted to use in cisterns, wells, supply tanks, water troughs, etc., and its everlasting qualities make a form which is a safe guard against caving or seepage of surface water into a well. The ends of the block are made with a tongue on one end and a groove on the other. Each block dovetails into the other and when the circle is complete it will stand thousands of pounds lateral strains the dovetail construction bracing each block in the same manner as an arch bridge. The mould is heavy and durable. It makes blocks 4 to 6 in. thick, 8 in. high and 14 to 16 in. long, the thickness and length varying according to the size of the circle. Moulds can be furnished for 3, 4, 6, 8, 10 or 12ft diameter. Fine strong water troughs and supply tanks can be made. For tanks and troughs use a rich mixture and cement the inside surface thoroughly and if necessary use water-proof materials for coating.

Well Curbing Mould



How the Blocks Look When Laid

Our form of block is the safest and the thickness of each mould is such that it saves cement without sacrificing strength.

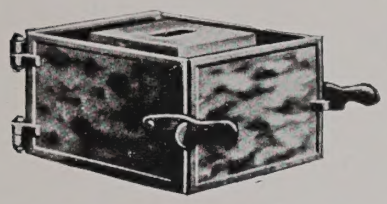
PRICES OF "NORTHWESTERN" WELL CURBING MOULD

3 ft	Diameter,	Weight	50	pounds,	**$ 10.00**
4 ft.	"	"	56	"	**11.00**
6 ft.	"	"	62	"	**12.00**
8 ft.	"	"	75	"	**13.00**
10 ft.	"	"	82	"	**14.00**
12 ft.	"	"	90	"	**15.00**

"Northwestern" Pier, Ball and Chimney Moulds

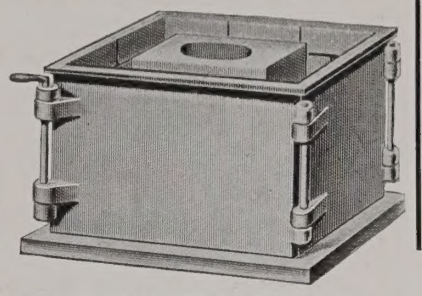
Pier and Chimney Mould makes Chimneys, Piers, Posts, Porch or Veranda Columns. Combined with Ball Mould makes Attractive and Stylish Ornamental Posts and Piers.

Chimneys. Concrete chimneys have become popular in the past few years and like all other building material it has been found cheaper, easier to erect, easily made and attractive in appearance. It is absolutely fireproof; stands sudden changes without cracking; are uniform in shape, quickly laid and each block forms a section that will not blow away. Clay brick has been tried and found wanting. The mortar quickly loosens; the brick fall out, necessitating frequent repairs, and hard winds often blow sections of the brick chimney away. Concrete has been adopted in large factories, and is becoming general in all buildings and structures everywhere.



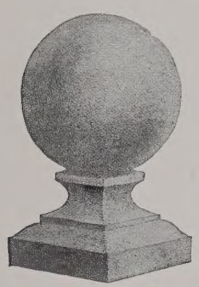
Rock Face Pier and Chimney Mould

Piers. This mold will be found very useful as there are many uses to which square blocks can be put. As a pier, concrete blocks are unsurpassed and the very dampness which loosens mortar in stone, or rots wood, brings out the best qualities of concrete. Blocks can be made either hollow or solid and they make solid substantial piers for any purpose.



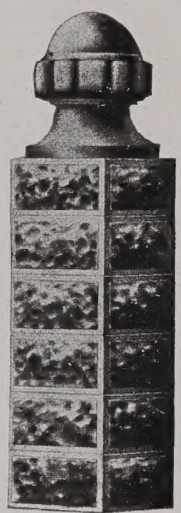
Chimney and Pier Mould, Imitation Brick

Ornamental Gate Posts. Used in connection with our Ball Moulds, some very handsome posts can be made at small cost. Such posts add greatly to the appearance of any property and their use gives a stylish aspect and distinctiveness so desirable in private residences, country homes, clubs, etc., setting the property off to the best advantage.



Plain Ball.
Prices Page 33

Columns. This mould makes fine columns and especially when used in connection with our Capital and Column Moulds illustrated on other pages. It makes an artistic massive looking column, symmetrical in design. Such columns can be fitted to frame houses with good effect, requiring no painting or repairs of any kind, and there are a great many buildings in every community which can be greatly improved at a small expense by the addition of a concrete porch.

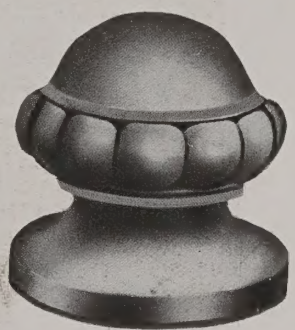


Pier and Ball.
Rock Design

in sections to permit of easy removal.

Construction of Chimney and Pier Mould. The Mould is made of gray iron castings, accurately fitted and is closed by means of latches, holding the mould firm and solid and making perfect blocks. The same mould is used for both pier and chimney blocks.

Designs. Ball mould can be furnished either plain or fancy as illustrated, and the pier and chimney mould in imitation pressed brick, rock, panel, tooled, tooled margin rock, tooled margin bushhammer and cobblestone for 14 and 16″ sq. other sizes, rock and brick face. In ordering be sure and specify face design.



Fancy Ball.
Prices Page 32

Ball Moulds. The illustrations show the beautiful lines of our ball moulds. Concrete has come into such general use that no plant is complete without a ball mould. They add materially to the appearance of any place and for ornamental work are unsurpassed. Contractors will find these moulds a very profitable investment. Moulds are made

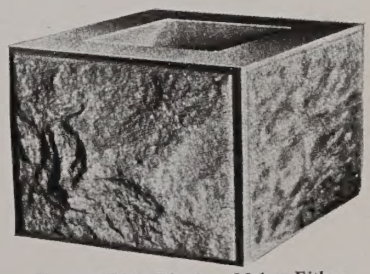
Gate Post,
Panel and Rock Design.

The illustrations of Pier, Chimney and Gate Post give a good idea of the wide range of uses to which such moulds can be put and the artistic possibilities when the size and design is varied.

PRICES

Pier & Chimney Mould,	size	14×14×8,	cores	7× 7×8,	wt.	60 lbs.	$ 8.00
" " "	"	16×16×8,	"	8× 8×8,	wt.	70 lbs.	9.00
" " "	"	16×24×8,	"	8×16×8,	wt.	90 lbs.	10.00
" " "	"	20×24×8,	"	12×16×8,	wt.	110 lbs.	12.00

Tamper furnished with each Mould



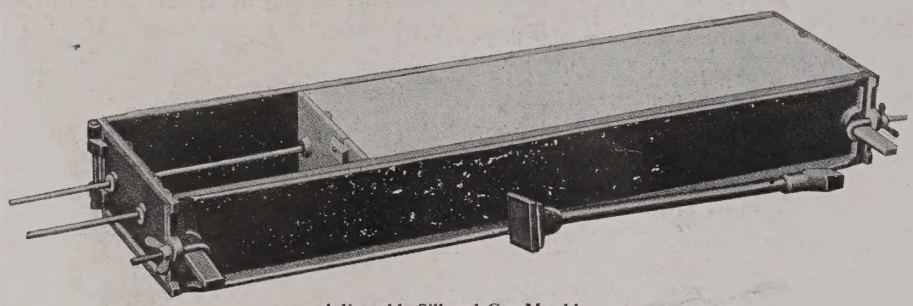
View of Plain Blocks. Makes Either Chimney or Pier

No Pallets are required, as the blocks can be made on any smooth surface

Chimney, Rock Design.
Rock Face Blocks and O. G. Pier Base

"Northwestern" SILL AND CAP MOULD

For making Sill Caps, Steps, Lintels, Window Sills, Water Table Blocks, Coping, Cornice, Door Caps, Slabs, Pier Blocks, Chimney Blocks, Paving Blocks, Etc.



Adjustable Sill and Cap Mould

A Sill and Cap Mould is indispensible to the contractor or builder and the use of such articles as mentioned put the finishing touch to a house or building so necessary to produce a finished appearance. All of the articles mentioned above can be made and by use of pieces of moulding, plate rails or fancy pieces of wood, the variety of design can be increased to practically any idea the builder may have in mind.

Construction. Construction of the machine is of gray iron castings, reinforced at all joints and edges to prevent any tendency to spring while tamping, making imperfect blocks. The mould is 5 ft. long and any size blocks can be made from 2 to 5 ft. long and from 10 to 14 inches in width, and 8 inches high. Adjustment for length is quickly made by means of stop off plate which is provided with rods. The stop off plate is made in sections, so that in changing for different widths, this can be done by taking off the necessary number of sections to make the width desired. The end plates have rods and set screws for adjusting to any width mentioned.

Operation. The adjustment for length is a very simple operation. The rods shown in the illustration have collars and set screws which are loosened and the stop off plate set to any desired length. The collars are then tightened by means of the set screws.

Adjustment for width is made by unloosening the screws on the extension rods and the mould set at the desired width. The stop off plate is furnished with three additional castings which are used in connection with the main stop off plate for making widths 10, 12 and 14 inches wide. To change the width of the stop off plate the small casting attached to the stop off plate is released and another casting attached giving it the proper width.

The adaptability of this mould readily lends itself to the manufacture of so many different articles that various things will suggest themselves as it is being used. Carpenters will find that window sills and caps can be made much quicker than when made of wood. The use of concrete sills and caps is indispensible in every stone and concrete building and does not look out of place in wooden structures. The reinforcing of steps or stones, where there is considerable weight, is a very easy matter in an open mould of this sort. The mould requires no special stand or frame nor no unnecessary lifting of heavy and cumbersome blocks while still green. Under our plan the mould is moved and not the block. The releasement of the various plates is a simple operation and this outfit is the most practical and convenient of the kind on the market. We receive daily a great many letters similar to the one shown on page 3, advising that no block making plant is complete without such a mould. To the builder who expects harmony in design, the use of concrete for purposes enumerated above is absolutely necessary.

Fancy Face Plates, Coping Plates, Etc. We have a large variety of fancy face plates for attractive designs as follows:

1. Plain Face.
2. Vertical Tooled Face Design.
3. Horizontal Tooled Face Design.
4. Rock Face Design.
5. Rock Face with Tooled Face Margin.
6. Bush Hammer Face with Tooled Margin.
7. Panel Face.
8. Egg and Dart Design Coping.
9. Return End Plates for any of the above designs.

Cap, Step or Lintel Stone. No additional equipment is necessary for making these blocks as the machine will make these just the way it is shipped. Stones will be perfect in shape and special facing material can be used if desired.

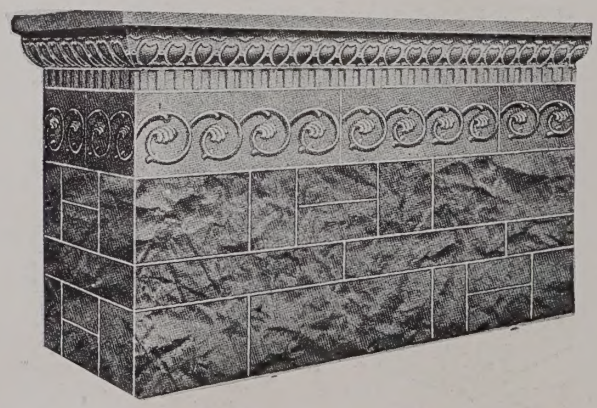
It is advisable to reinfore the steps and corrigated or twisted iron bars make a very good material. Four to six pieces placed near the top and bottom of the stone will answer the purpose. Barb wire can also be used and is generally laid in net work shape to secure the best results.

When panel effect is desired, this can be secured by using our panel face plate and it produces a very pleasing effect in steps and sill caps.

Sill Stone. Sill stones with depression for shedding water can be made without any additional equipment by using a beveled piece of wood placed in the bottom of the mould. The wood should previously be painted or varnished to prevent it from sticking to the concrete. Full instructions sent with each mould.

Water Table Stone. Making water table stones only requires a triangular piece of wood placed in the lower edge of the mould which gives a beveled effect and is being used extensively in construction to produce a contrast between the foundation and the walls of the building to relieve the monotony of a solid wall.

Special and Fancy Plates. The builder is not necessarily confined to plain face but by using the face plates listed above some very pleasing effects can be secured in Rock Face, Rock Face with Tooled Margin, Bush Hammer Face with Tooled Margin, Horizontal Tooled Face, Vertical Tooled Face and Panel Face.

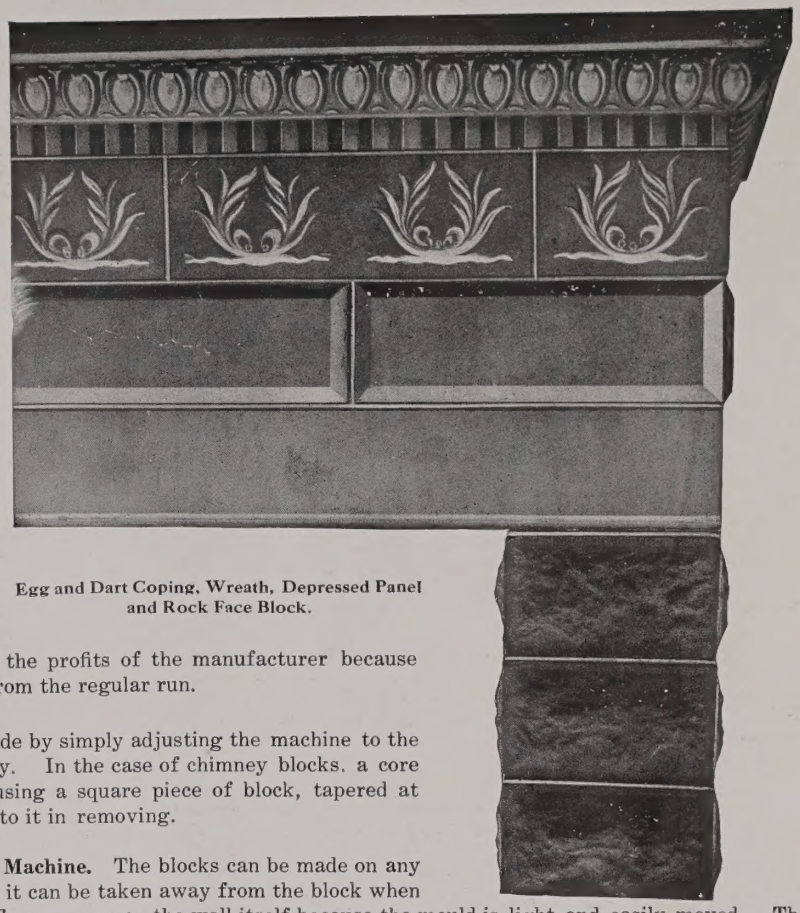


AN ATTRACTIVE COMBINATION

Egg and Dart Coping, Whirlwind Scroll and Broken Ashler Blocks

"Northwestern" SILL AND CAP MOULD

Coping or Corner Stones



Egg and Dart Coping, Wreath, Depressed Panel and Rock Face Block.

Egg and Dart Design. A very handsome finish for the top of the wall is secured by using our Egg and Dart Coping Face Plate. This design is very popular, being extensively used in interior house decoration and are clear cut and pleasing in design. We show on page 28 a sample wall finished with the Egg and Dart Coping with a Whirlwind Scroll course of blocks and Broken Ashler design, all made on our machines. This is an example of what can be done and even better combinations can be worked out by a blockmaker. On this page we show Egg and Dart Coping with a Wreath Belt course of blocks and a Panel block made on the Sill and Cap machine.

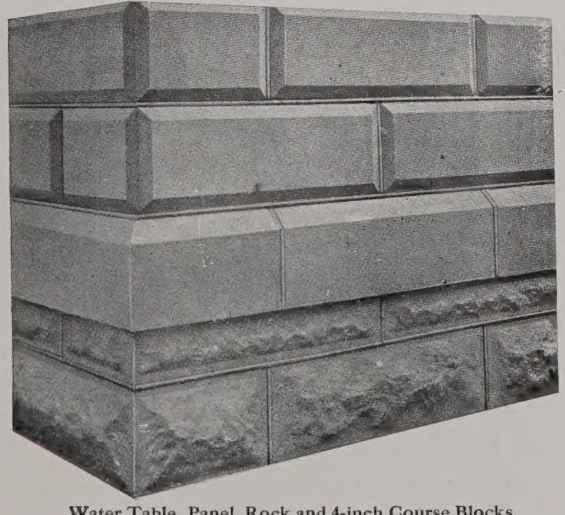
Special Faces, Paving Blocks, Chimney Blocks, Etc. When a special face design not listed is desired they can be easily worked out by securing pieces of moulding from your local lumber yard or picture framer. The use of such moulding not only saves equipment but permits of larger variety of design and chance for individuality. The more varied the production of concrete articles the greater will be the profits of the manufacturer because people like variety and something a little different from the regular run.

Chimney Blocks and Paving Blocks can be made by simply adjusting the machine to the proper size and making the blocks in the regular way. In the case of chimney blocks, a core would have to be used which can easily be made by using a square piece of block, tapered at one end and varnished so the concrete will not stick to it in removing.

No Pallets or Stand Necessary With This Machine. The blocks can be made on any smooth surface and the mould is so constructed that it can be taken away from the block when released. In this way the blocks can be made on a floor or even on the wall itself because the mould is light and easily moved. The thumb screws permit of easily releasing face plate and the set screws on rods can be easily loosened to permit easy removal of block.

Construction is Mechanically Perfect. The construction of this mould is mechanically perfect and the adjustment provided in the simplest manner possible. For simplicity the "Northwestern" Sill and Cap Mould can not be surpassed.

No Danger of Springing. All of the plates are reinforced with heavy ribs on both the upper and lower edges of the plate, making a rigid mould which will not spring in tamping.



Water Table, Panel, Rock and 4-inch Course Blocks

Special Facing or Fancy Colored Faces. In making fancy faces the face plate is padded with a richer material, the back filled in with coarser material and the top faced with a finer material. In this way the cost of the block is reduced, strength is not lowered and attractive colors can be incorporated when desired. When colored material is used it is placed in the mould in the same way.

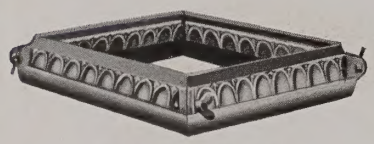
Prices "Northwestern" Sill and Cap Mould.

Adjustable Sill and Cap Mould, complete,	Weight,	180 lbs.	$25.00
Face Plates, any design mentioned	"	55 "	10.00
Egg and Dart Design Coping	"	70 "	15.00
Right and Left Hand Return End Doors for Egg and Dart Design Coping, including stop offs,	Weight	60 lbs.	10.00
Return End Doors for any face plate,	"	50 "	4.00

"Northwestern" Porch Column and Baluster Outfit

Wide Range of Designs from a few Moulds. Makes Porch Columns, Balusters, Rails, Piers, Chimney Blocks, Paving Blocks and Gate Posts

Gothic Capital



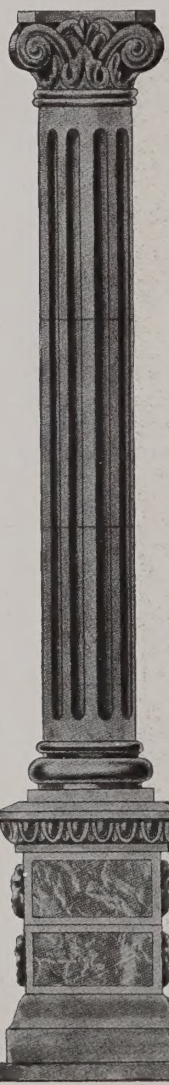
Egg and Dart Pier Cap

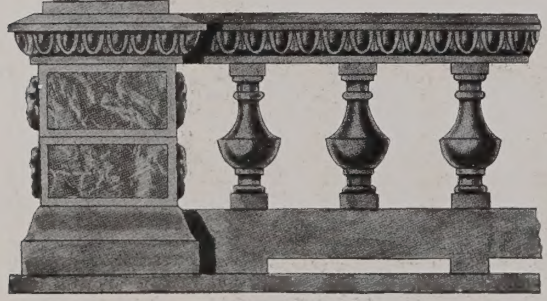
Egg and Dart Top Railing

BE A CONCRETE SPECIALIST. The manufacture of Concrete Porches offers a wide field and gratifying returns. Concrete porches look well on any building whether wood, stone or brick and many a building has been improved 100 per cent. by the addition of such a porch. The artistic possibilities with this outfit is practically unlimited and the popularity of our outfits is well merited because of the handsome appearance and pleasing designs. One of our customers writes that he made porch columns for 55c each. and paid for his outfit from the proceeds of the first sale. The manufacture of specialties always bring the largest profits and every carpenter, mason or block maker will find such an outfit a paying investment. Specialists in every line always get the largest profits and it is no exception in this line. A very little experience supplies all the knowledge needed and ornamental moulds are no harder to make than common blocks. A little more care is all that is required. The adaptability of concrete for all ornamental purposes has been proven so conclusively that there is a large demand for this class of work and brings enormously large profits to the manufacturer. If you are a block maker and not equipped with a porch column outfit, you are not getting the most out of your business

DESCRIPTION OF MOULDS

We illustrate the various moulds that constitute each outfit and give on the following page a list showing just what is shipped. In ordering please be explicit and always state design of capital, pier cap, pier body and railing moulds. The illustrations of the finished columns and railings are only suggestive and any combination can be worked out that they may be desired by having the various designs. All moulds are interchangeable and are made to fit so nicely that after cementing together they form one perfect piece of work so like cut stone that only an expert can detect the difference.





Gothic Design

Combination Column Mould consists of plain mould and fluting attachment for making both plain round and fluted columns. Fluting attachment consists of stopoff rings and stops for forming the fluting. The adjustability of our moulds makes this outfit most desirable.

Capital Moulds are made in both Ionic and Gothic design. Moulds are made in four sections held together with latches; and, while the designs are deep cut, they come away from the green mould without any danger of breakage.

Pier Cap are furnished in either Plain or Egg and Dart designs and either can be used in connection with each column, although the Egg and Dart Railing should be used with the Egg and Dart Pier Cap for conformity in design.

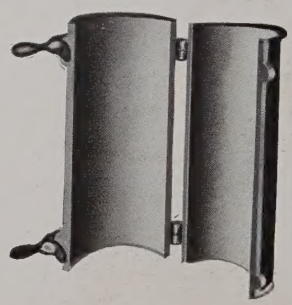
Pier Body mould can be furnished in a number of designs, plain, rock, panel, tooled, tooled margin rock, tooled margin bushhammer or cobblestone and the utility of such a mould is such that no one can afford to be without one. Piers, gate posts, paving blocks, chimney blocks, foundation blocks and many other similar blocks can be made. The mould is made in four sections, hinged on two sides and having two handles in front for locking the mould.

Baluster Pallet

Baluster Mould is bell shape made in two sections for easy removal. One pallet is furnished with mould as illustrated. Bell design makes attractive and pleasing balusters.

Top Railing Moulds are furnished in either Plain or Egg and Dart design. We also have patterns for making curved railings in both designs for 16-foot diameter. Builders will appreciate the advantage of such a mould as either round or straight porches can be made and at no greater cost than straight ones.

Bottom Railing Moulds are plain and a small water shed mould is furnished for holding the railing high enough from the floor to permit the water to run off.

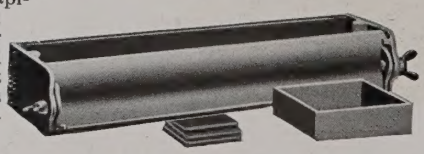


Column Mould

COMBINATION OUTFITS ARE BEST

Because it permits of a number of different designs from the same moulds and at no greater expense. The moulds shown in the center of these two pages are common to both designs and are shipped with each outfit. The moulds at the top of either page are used in connection with the design shown on the same page and either lot is shipped with the regular moulds. This will give a good idea of all the moulds that are necessary to have one or two complete outfits and will convey some idea of the advisability of having a combination outfit. Only four extra moulds are necessary for making both designs, viz.; Capital, pier cap, pier body and railing moulds, and a better combination can not be found on the market. We suggest careful consideration of this outfit before purchasing elsewhere.

O. G. Pier Base



Bottom Rail and Water Shed Block Moulds

"Northwestern" Porch Column, Pier and Baluster Outfit

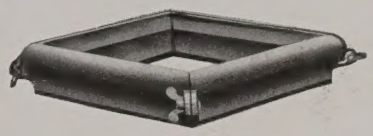
All Moulds are Interchangeable with Designs shown on opposite page, Securing Variety in Design by use of a few Additional Moulds.

The Finished Porch will be Symmetrical in Appearance and so like Cut Stone that only an Expert can Detect the Difference.

Ionic Capital

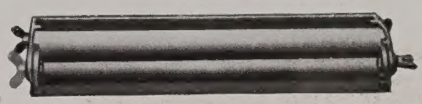
With each Outfit we furnish the following Moulds:

1 Combination Plain and Fluted Column Mould	1 Pier Cap Mould	1 Top Railing Mould
1 Capital Mould	1 Pier Base Mould	1 Baluster Mould
1 Column Base Mould	1 Pier Body Mould	1 Baluster Pallet
	1 Bottom Railing Mould	1 Water Shed Mould



Plain Pier Cap

These moulds are so manufactured that they fit together perfectly and the completed porch will be one solid, massive piece of concrete work, symmetrical and pleasing in appearance.



Plain Top Railing

"PRICES "NORTHWESTERN" PORCH COLUMN AND BALUSTER OUTFIT

10″ Porch Column and Baluster Outfit (State design), wt. 650 ..... $65.00
12″ " " " " " wt. 775 ..... 75.00

PRICES OF SEPARATE MOULDS FOR 10 INCH COLUMN.

Baluster Mould

Column Mould, size, 24″ high, 10″ diameter, wt. 125 ..... $13.00
Combination Plain or Fluted Designs.

Capital Mould (State design) 10″ diameter, wt. 75 ..... 11.50
Ionic or Gothic Design.

O. G. Column Base Mould, size 5¾″ high, 14″ diameter, wt. 40 ..... 6.00
Pier Cap Mould, size 4¾″, 14″ square at base, 17″ at top, wt. 40 ..... 9.50
Plain or Egg and Dart Design.

Pier Body Mould, size 7¾″, 14″ square, wt. 75 ..... 8.00
We can furnish any of the following designs, Plain, Rock, Panel, Tooled, Tooled Margin Rock, Tooled Margin Bushhammer, and Cobblestone. (State Design Wanted.)

O. G. Pier Base Mould, size 5¾″ high, 14″ square at top, 17″ at bottom, wt. 50 ..... 9.75
Top Rail Mould, 4¾″ high, 24″ long, 5″ wide, wt. 40 ..... 8.00
Plain or Egg and Dart Design.

Bell Baluster Mould, size 3½″ diameter at bell, 17″ high, wt. 25 ..... 5.00
Bell Baluster Pallets, (One pallet is necessary for each Baluster made in a day as they must set in pallet) wt. 13 ..... 3.00
Bottom Rail and Water Shed Moulds, size 5¾″ high, 24″ long, 5″ wide, wt. 40 ..... 8.00

Fluting Attachment

PRICES OF SEPARATE MOULDS FOR 12 INCH COLUMN.

Column Mould, size 24″ high, 12″ diameter, wt. 150 ..... 14.50
Combination for Making Plain and Fluted Designs.

Capital Moulds, Ionic or Gothic, 12″ diameter, wt. 80 ..... 13.00
O. G. Column Base Mould, size 5¾″ high, 16″ diameter, wt. 70 ..... 8.00
Pier Cap Mould, size 4¾″ high, 16″ square at bottom, 19″ at top, wt. 50 ..... 10.50
Plain or Egg and Dart Design.

Pier Body Mould, size 7¾″ high, 16″ square, wt. 100 ..... 9.00
Any design mentioned above under 10 in. outfit.

O. G. Pier Base Mould, size 5¾″ high, 16″ Sq. at top, 19″ at bottom, wt. 70 ..... 11.00
Top Rail Mould, same as for 10″ outfit 8.00
Bell Baluster Mould, same as for 10″ outfit 5.00
Bell Baluster Pallets, same as for 10″ outfit 3.00
Bottom Rail and Water Shed Moulds, same as for 10″ outfit 8.00

O G Column Base

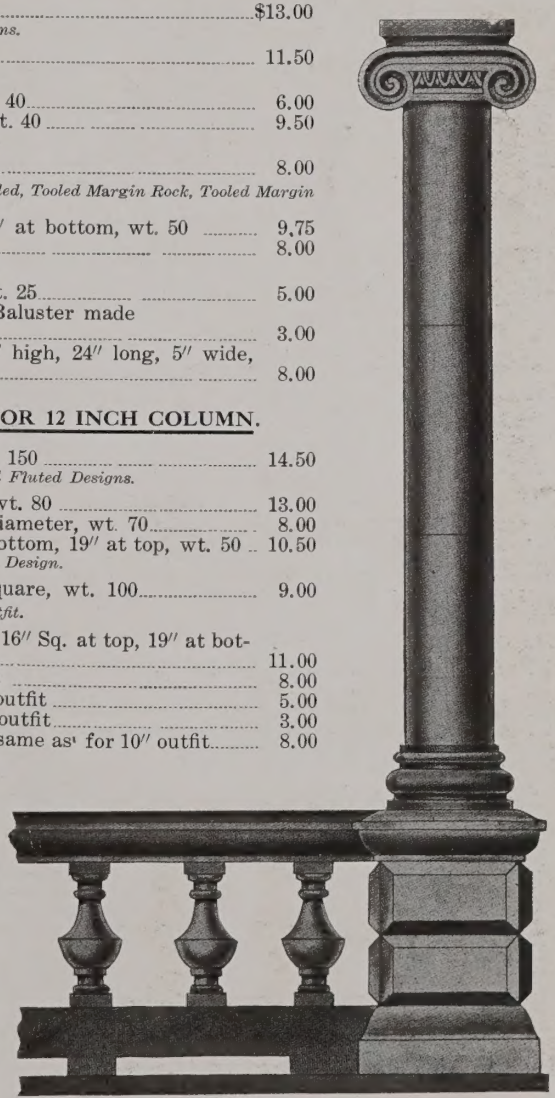
SPECIAL AND CURVED RAILING MOULDS.

Straight Railing Mould, illustrated on page 35, length 32″ $10.00
(Can be used on Balusters from 4″ to 6″ wide.)

Curved Top Railing Moulds, same as furnished with the above outfit in Egg and Dart or Plain design for 16 ft. diameter $10.00

Curved Bottom Railing Mould, same size and style furnished with regular outfit but curved for 16 ft. diameter $10.00

Pier Body

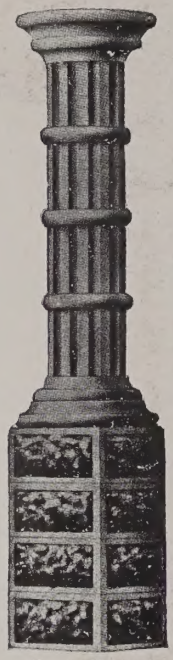


Ionic Design

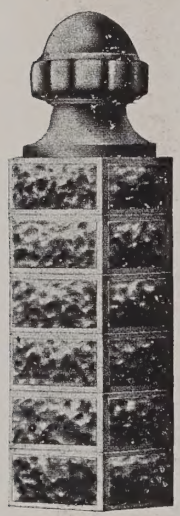
"Northwestern" Five-Piece Porch Column and Pier Outfit

MAKES HANDSOME SOLID MASSIVE COLUMNS AND PIERS

Turns the most humble abodes into handsome, attractive dwellings, giving tone and adding value to the property



O. G. Column



Pier and Ball

Everyone agrees that concrete is the ideal building material; the only objection was its inartistic appearance because of lack of ornamental moulds for fashioning it into artistic and graceful forms and shapes. A few years ago moulds for making concrete porch columns were entirely unknown, but now the most beautiful effects are obtained by the use of steel moulds. Concrete lends itself so readily to the making of different shapes and forms that it can be moulded to most artistic designs, demand for which is becoming greater and greater.

Our Five-Piece Outfit. This outfit permits of various combinations of designs and beautiful gate posts, combination pier and column, column without pier, chimney moulds, house and porch piers, and various other designs can be made from these few combinations. They also form a part of the outfit shown on pages 30 and 31 and with the addition of a Baluster and Railing outfit it makes this combination most complete.

Construction. Only the finest close grained gray iron castings are used and each mould is made in sections to permit of easy removal. We send instructions which fully explain successful making of all kinds of ornamental moulds.

Special Facing. The use of special facing offers a splendid chance for individual effort and offers opportunity to the concretor to broaden his field of profit. There are various materials which can be used to produce tasteful and pleasing designs. Granite grit (a material having every appearance of a rich sparkling granite face), white cement, white sand, marble and granite dust, and various coloring material can be successfully used.

Combination Moulds are Best. Practically our entire line of ornamental moulds are made up of combinations. The advisability of such combination moulds will be evident to everyone as a great variety in both design and size can be made. It is expensive to buy an entire new mould for a change of design and entirely unnecessary with this outfit. The Five-Piece Outfit is a combination of the moulds shown at the bottom of this page, which are so made that they can also be used in connection with moulds shown on pages 30 and 31, which additional moulds can be secured anytime.

Clear Smooth Moulds Necessary. The successful making of columns and piers is only accomplished by means of smooth clear-cut perfectly fitting patterns. Column Cap and Ball moulds require more care in making, but nevertheless it is not a difficult matter with "Northwestern" moulds.

The illustrations show pier and also column with pier base made with this outfit. Many additional combinations will suggest themselves to the operator, and while it does not permit of as wide a range of combinations as outfit on pages 30 and 31, it will be found a valuable addition to every block outfit.

Either plain or fluted column mould and plain, rock, panel, tooled, tooled margin rock, tooled margin bushhammer or cobblestone pier moulds can be furnished. Always state design wanted.

Prices of "Northwestern" Five-Piece Porch Column and Pier Outfit

10 in., weight 200 lbs.	Price $30.00
12 in., weight 375 lbs	Price 35.00

Separate Moulds for 10-inch Column

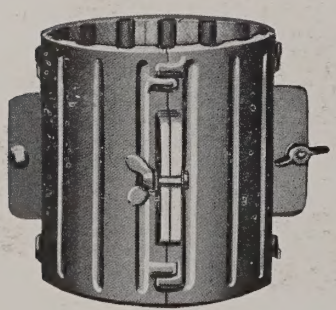
10 in. column mould, 12 in. high, wt. 45 lbs.	$6.00
10 in. ring mould, wt. 20 lbs.	5.00
10 in. pier mould, 14 in. square, 8 in. high, wt. 75 lbs.	8.00
10 in. O. G. column base and cap mould, wt. 40 lbs.	6.00

Ring Mould

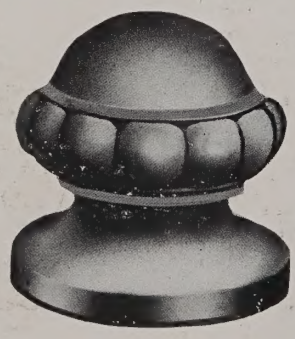
Separate Moulds for 12-inch Column

12 in. column mould, 12 in. high, wt. 65 lbs.	$9.00
12 in. ring mould, wt. 30 lbs.	7.00
12 in. pier mould, 16 in. square, 8 in. high, wt. 100 lbs.	9.00
12 in. O. G. column base and cap mould, wt. 50 lbs.	8.00

O. G. Column Cap



Column Mould

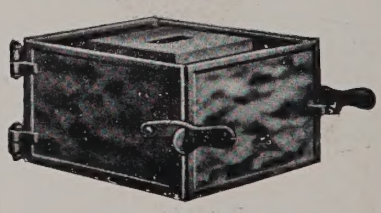


Ball Mould

Ball Moulds

Ball mould for 10 in. column, base 12 in., height 12 in., ball 9½ in., wt. 50 lbs. **Price, $8.50**

Ball mould for 12 in. column, base 14 in., height 14 in., ball 11 in., wt. 65 lbs. **Price, $9.50**



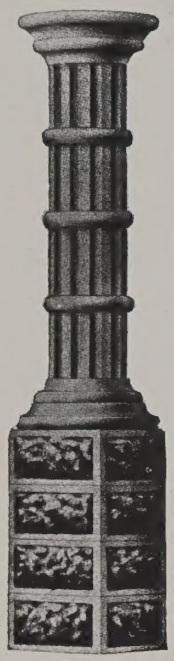
Pier Mould

"Northwestern" Ornamental Moulds

Beautiful
Harmonious
Artistic
Designs

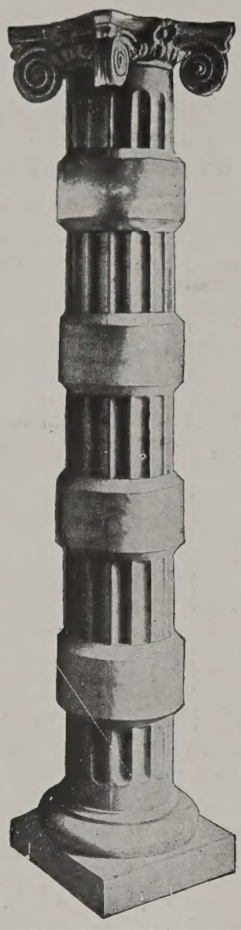
True
Clear
Cut
Lines

Renaissance "Water Leaf" Column



O. G. Ring Fluted Column and Pier

(Prices on Page 32)



Empire Column

Renaissance Column

Diameter, 8 in.
Height, 6ft.
Weight 165 lbs.
Base, 12 in.
Price, $35.00

Diameter, 10 in.
Height 6¼ ft.
Weight, 230 lbs.
Base, 14 in.
Price, $40.00

Diameter, 12 in.
Height, 6ft. 5 in.
Weight, 240 lbs.
Base, 18 in.
Price, $45.00

Empire Mould

Diameter, 11 in.
Height, adjustable
Base, 16½ in.
Weight, 140 lbs.
Price, $35.00

Diameter, 18 in.
Height, adjustable
Base, 27 in.
Weight, 200 lbs.
Price, $75.00

Renaissance "Water Leaf" Moulds

Diameter,	8in.	10in	12in.
Height, -	6ft.	6ft3in.	6ft.5in.
Base, - -	12in.	14in.	18in.
Weight,	170lbs.	236lbs.	246lbs.
Price,	**$35.00**	**$40.00**	**$45.00**

Write for book of Instructions. Many designs from a few combination moulds.

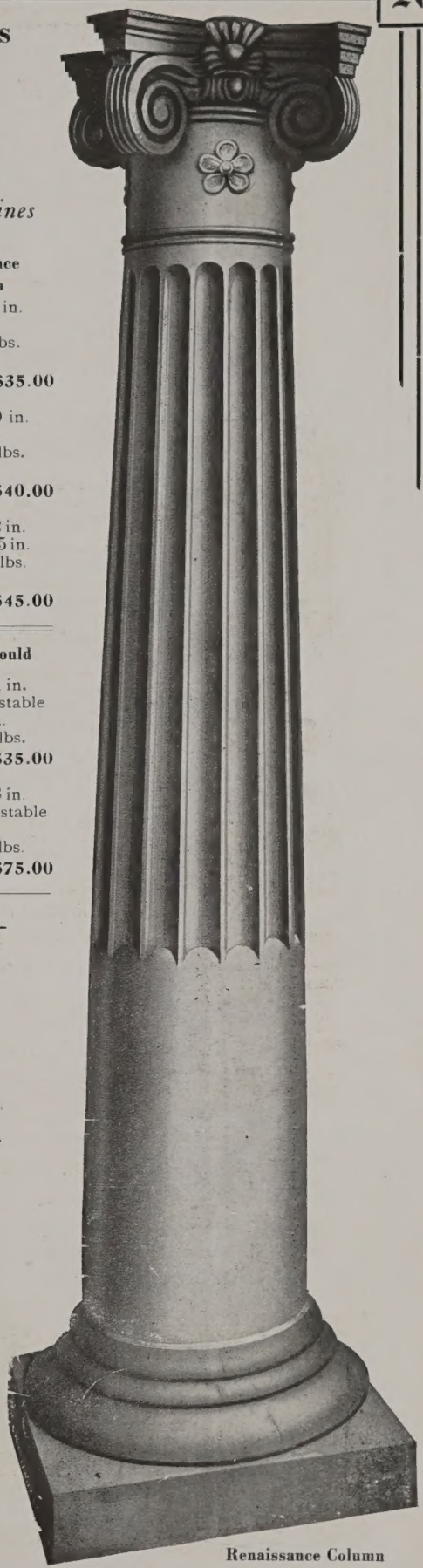
Ball Mould

Base	Ball	Height	Weight	Price
2½ in.	2½ in.	4¾ in.	2½ lbs.	$3 00
3½	3½	6½	10	4 00
6	6	11	20	10 00
7	6	13	28	10 00
8	6	12	40	10 00
9	8	14	45	12 50
10	10	19	56	15 00
12	12	23	76	17 00
15	15	32½	150	20 00
16	16	33	158	20 00
18	18	34½	175	20 00

Ball Mould

Art—Ancient and Modern

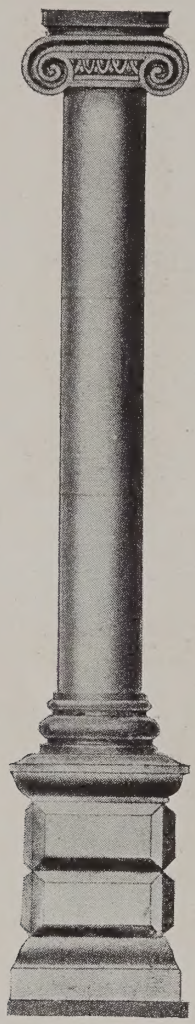
In the old days the sculptor spent years on a model to be enjoyed only by the few, who could afford it, and their friends. The present age has witnessed a remarkable change and now everyone can afford and does have some work of art in their homes. The sculptor spends the same time and pains on the models, the effects are just as beautiful, but the models serve as patterns and these patterns are used as moulds to be fashioned by anyone and at a fraction of the cost of the original. "Northwestern" moulds are all made by artists of world-wide fame and are popular wherever introduced. The beautiful, artistic lines appeal to every architect and builder, and the field for ornamental moulds is unlimited.



Renaissance Column

"Northwestern" ORNAMENTAL MOULDS

Ionic



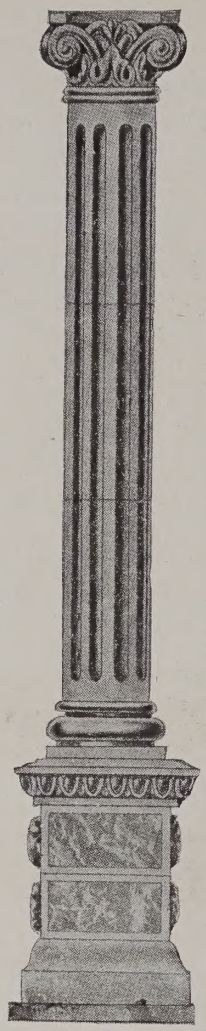
Prices on Page 31

Grecian

Diameter, - 10 in.
Height, - adjustable
Base, - - 14 in.
Weight, - - 126 lbs.
Fluted column section
either 2ft or 2ft 5in.

Price $50

Gothic



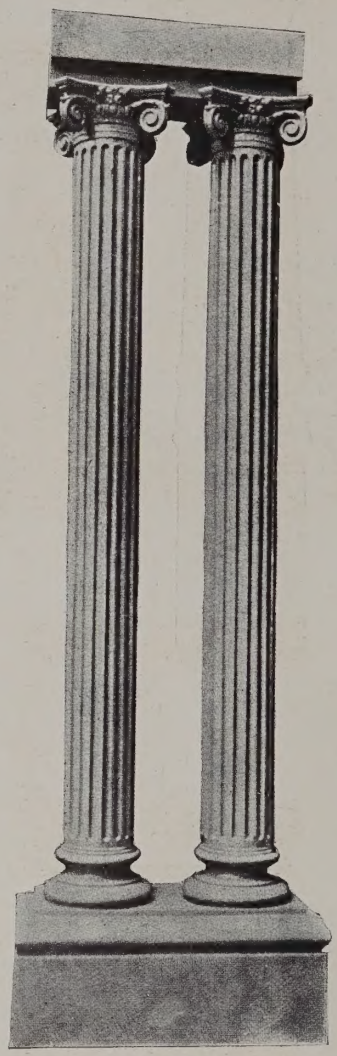
Prices on Page 30

Doric

Tapered.
Diameter, - 13¼ in.
Height, - - 9ft.
Neck, - 10½ in.
Base, - - 18 in.
Weight, - 390 lbs.

Price $50

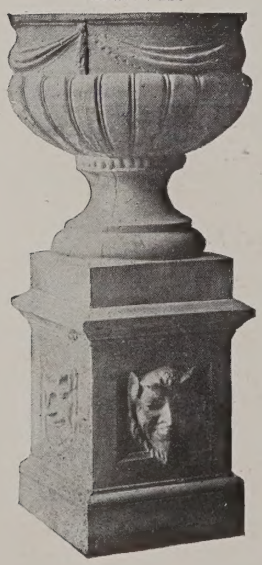
Roman



Prices on Page 30

Stylish and Rich Architectural Designs from Every Period of Art

Lawn Vase



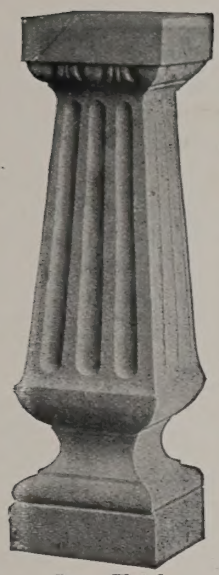
Height 33½ in
Dia - 16in.
" of Bowl 12in.
Depth " 8in.
Height of Base
15½ in.
Size of Base
12 in. square
Wt. 164 lbs.

Price $30

Vases and Fountain of Concrete
Erected by Chas. Eilbacher, contractor. Illustration from "Cement Age"

"Northwestern" Ornamental Moulds

BALUSTER MOULDS



Square Fluted "Egg and Dart"

Fancy Round "Renaissance" Leaf

Square Fluted "Egg and Dart"

14 in. $ 7.50. Base & Top 4×4. Wt. 25 lbs.
20 in. 15.00. Base & Top 8×8. Wt. 50 lbs.
24 in. 17.50. Base & Top 8×8. Wt. 60 lbs.

Fancy Round "Renaissance Leaf"

18 in. $10.00. Base & Top 5×5. Wt. 25 lbs.

Square Fluted "Heart Leaf"

18 in. $10.00. Base & Top 6×6. Wt. 25 lbs

Plain Round

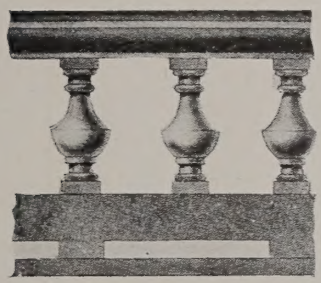
14 in. $ 7.50. Base & Top 4½×4½. Wt. 12 lbs
16 in. 10.00. Base & Top 5½×5½. Wt. 15 lbs
18 in. 10.00. Base & Top 6 ×6 . Wt. 21 lbs
24 in. 15.00. Base & Top 6 ×6 . Wt. 50 lbs
30 in. 20.00. Base & Top 12×12 . Wt. 75 lbs

Plain Round

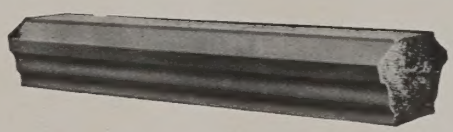
Square Fluted "Heart" Leaf

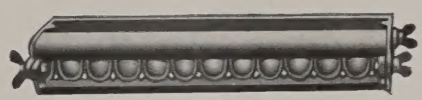
RAILING MOULDS

Straight or Curved

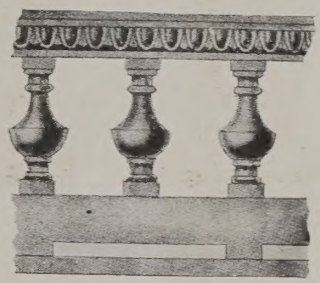


Bell Baluster and Plain Railing
(Prices page 31)

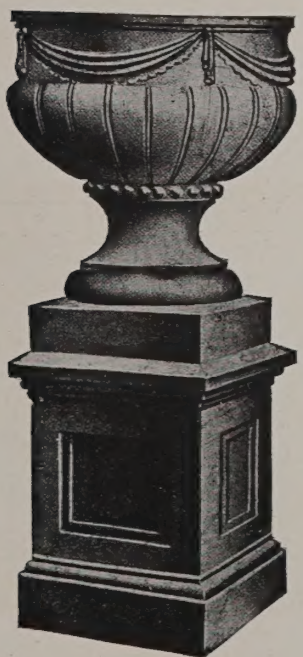




Plain and Egg and Dart Railing Moulds
(Prices on pages 30 and 31)



Bell Baluster and Egg and Dart Railing
(Prices page 30)



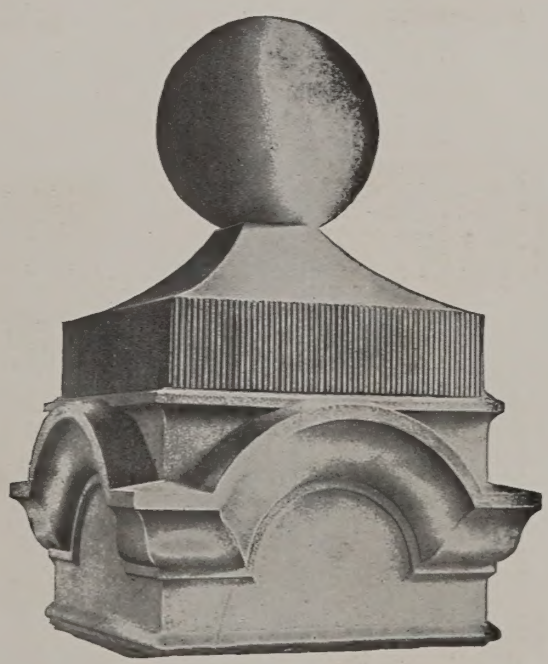
Lawn Vase
(Prices and Dimensions on opposite page)

VASE, POST AND POST CAP

Newel Post
(Depressed Panel)
Height 40 inches. Base 8×8.
Price $20.00

Roman Post Cap

12 inch Ball, 16 inch Cap, 16 inch Ball Base (Vertically Tooled.) Weight 102 lbs. Price complete $30.00.



Roman Post Cap

"Northwestern" MONUMENT MOULDS

Fitting Tributes of Respect to the Dead

Designed by Leading Sculptors of America

Appropriate Memorials at Nominal Cost

HEADSTONE
Height, 24 in. Base, 18 x 24
Price, $60.00

HEADSTONE
Height, 86 in. Base, 36 x 20
Price, $110.00

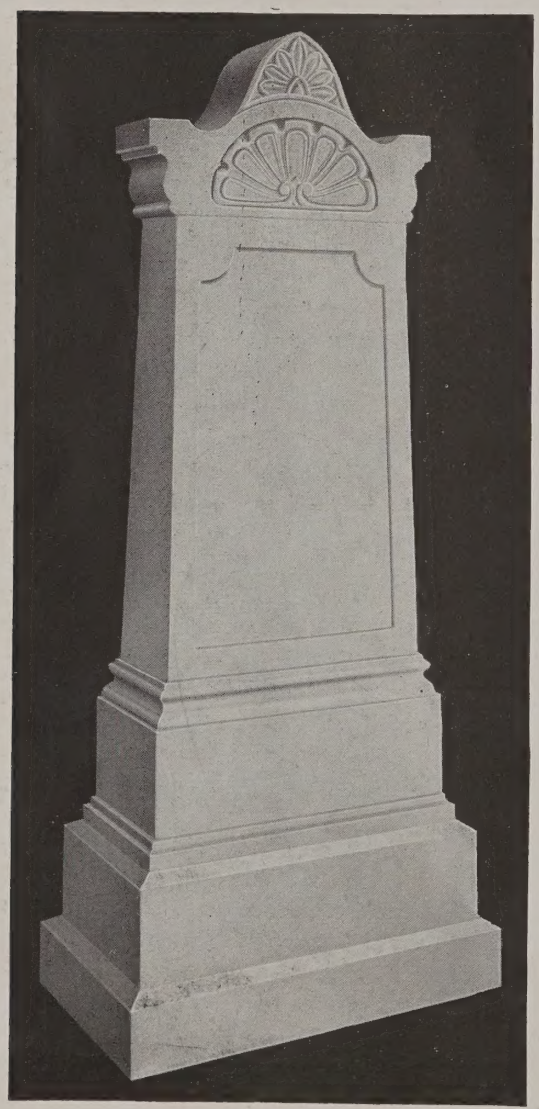
Construction. Our moulds are made of heavy gray iron castings carefully fitted together, and are collapsible to permit of easy removal from mould. All joints are planed and fitted tightly throughout making clear cut edges and designs. Special material is used in the manufacture of these moulds to produce smooth surface castings, so essential to sharp clear cut monuments.

Special Material. Concrete is not necessarily confined to the conventional gray color but can be made up in a number of attractive colors and offering something entirely new and original in the tomb stone line; Medium Red, Bright Red, Brown, Dark Blue, Gray and even Black, the acknowledged mourning color can be used.

White sand and cement are also advantageously used and the average cost is not excessive. The white sand can be secured for 75 cents per ton in bulk carloads and some very beautiful designs, most attractive and elegant, are made. This material is also sold in 150 pound bags at 25c per bag.

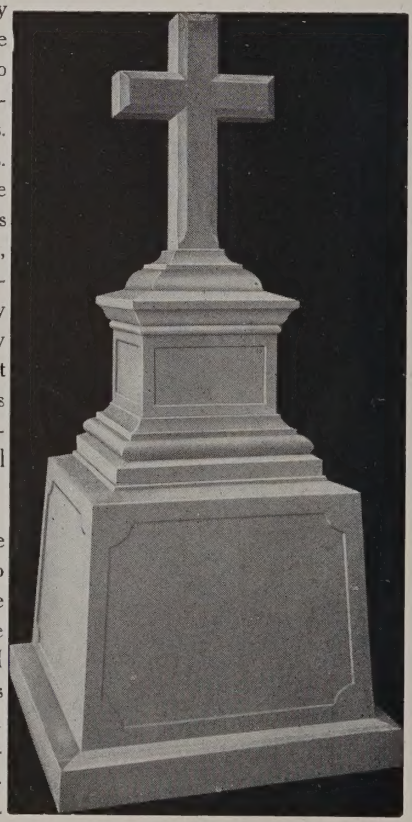
Granite Grit is also extensively used in ornamental moulds and this material used with white cement, has the appearance of sparkling granite and only the closest inspection discloses the fact that it is not real stone. The whole effect is rich, solid substantial tomb stone having practically the life of real stone and in some respects superior to granite because it is unaffected by heat and made at practically one-fourth the cost. The granite grit is embedded in quartz crystal and gives permanent color and sparkle to the face of the block. This material can be purchased at $5.00 per ton and gives a very beautiful rich appearance to the tomb stone.

We issue a special book of instructions on the subject of ornamental designs which gives valuable information on the manufacture of all kinds of moulds and is sent free on request.



Designs. We illustrate a variety of special designs and sizes to suit the tastes of all, furnishing obelisk in two sizes, three sizes head stones, headstones and cross, and grave markers. The moulds are furnished in sections. In making the grave stones they are left in the various sections of moulds until hard enough to remove the forms, after which they are cemented together to form one solid stone. By making these in sections it is not only easier to handle but more perfect stones can be made in smaller moulds than in larger ones. The cement process makes a perfect solid stone of all the parts.

Lettering. The low headstone shown at the top of this page and also the top of the preceding page can be lettered at the time of making the stone if desired or an inexpensive slab of marble can be set in the face of this head stone or in the body of any of the grave stones by means of the process fully described in the book of instructions mentioned above, which furnishes place for inscription and can be carved out any time as in natural stone.



HEADSTONE AND CROSS
Height, 66 in Base, 30 x 30
Price, $105.00

"Northwestern" MONUMENT MOULDS

CONCRETE LASTS FOREVER.

The lasting qualities of Cement make its use most desirable for this as well as building and ornamental lines and our moulds open up a field with unparalleled opportunities for large profits. Concrete has no apologies to offer other materials because it does not make a cheap looking and undesirsble memorial. It opens up an immense field for the operation of those who will take the initiative because it strikes the great middle and industrial classes, well-to-do farmers and people of moderate means. It enables the granite and cement worker to get to the class of people who are the largest and most liberal patrons.

The precedent has been set by the United States Government, McKinley Memorial Association and various associations erecting monuments on southern battle fields and the manufacture of such moulds is no longer an experiment. The granite worker and cement contractor can have every assurance that when properly made the concrete moulds will reflect credit on his work and the profits will be larger than in granite lines. The initial expense is soon covered by the profits and a great deal more business can be secured by this process than granite because of the low cost of production.

Some of the largest and finest memorials of this day and age are made of concrete material. The McKinley Memorial Association used concrete entirely in the construction of the McKinley Memorial. The United States government spends thousands of dollars each year erecting **concrete** grave markers for their dead. It is a fitting and appropriate material, permitting of beautiful finish and fashioned in the experienced hands to the most elaborate designs and finish, equal in quality to stone, of just as beautiful finish as granite, and made at the barest fraction of cost of either one. It is not a shoddy, cheap looking substitute for marble or stone but has distinctive qualities of its own.

View of Obelisk Moulds

The manufacture of monuments, grave stones, head stones, and markers opens up a new field with immense possibilities and unparalled profits.

Millions of graves today are unmarked in any way, not because of lack of respect or sentiment, but because nine out of ten people are unable to pay the high cost of cut stone, marble and granite. There are hundreds of people in every community who would gladly erect a fitting memorial to their dead if it could be done within their means. The economical price of concrete will bring dozens of orders to the energetic man who goes after the business.

It is not a difficult matter to secure orders for monuments at the prices which can be offered and we will gladly give full information by letter to anyone who is not familiar with the business and don't understand how to go after the orders.

Comparative Cost of Concrete and Cut Stone.

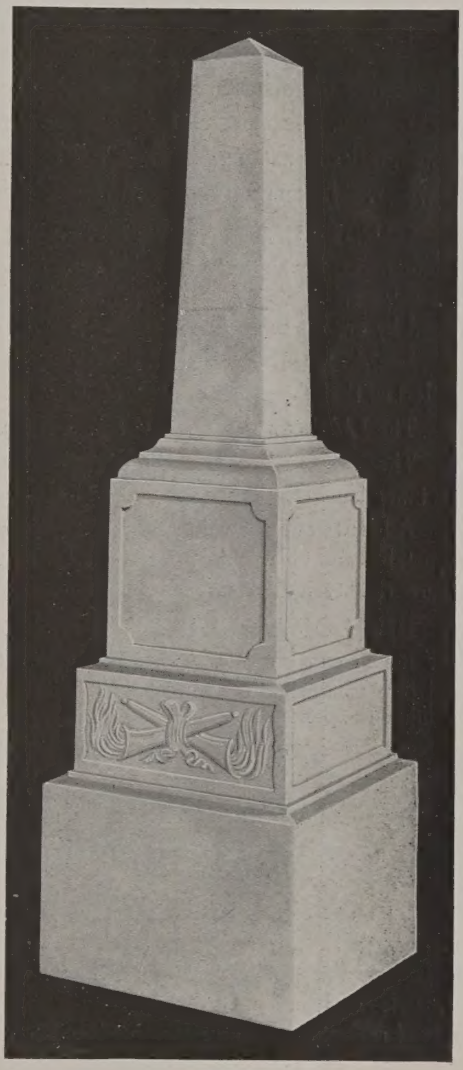
	Cut Stone	Cement, Labor and Material	Sells for
24 in. Headstone	$ 75.00	$ 3.50	$25 to $50
22 " "	75.00	2.50	25 to 50
86 " "	150.00	6.00	60 to 75
84 " Obelisk	150.00	6.00	50 to 75
42 " "	75.00	4.00	25 to 50
66 " Headstone and Cross	120.00	6.00	40 to 60

Concrete Monuments can be shipped hundreds of miles with profit and while the local business is more extensive in the manufacture of blocks, the manufacture of monuments offers larger profits and wider fields of work, as much of the business can be solicited for miles around and through surrounding towns. It seems incredulous that a very fine 7 ft. obelisk can be manufactured for $6.00, but it is a fact and shows the immense profits from this line.

HEADSTONE

Height, 22 in. Base, 18 x 24

Price, $50.00



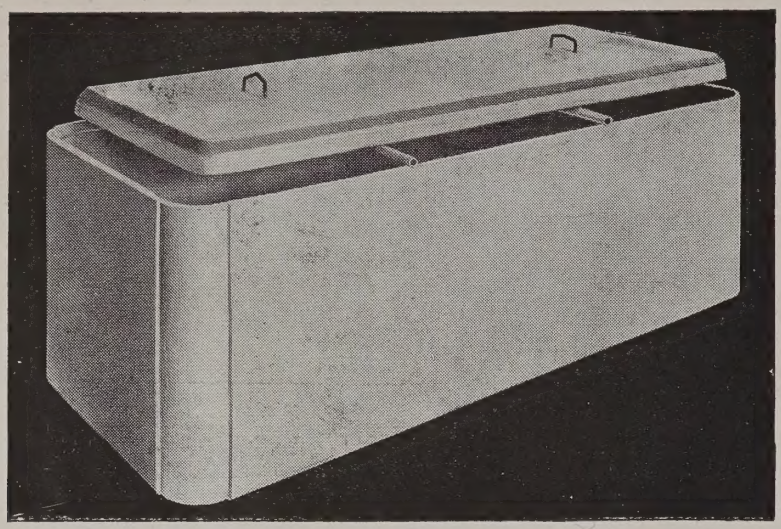
OBELISK

Height, 84 inches or 42 inches

Base, 36 x 36 " - 36 x 36 "

Price, $115. - - $57.50

"Northwestern" STEEL BURIAL VAULT MOULDS



Adjustable to Various Sizes

RUST PROOF
VERMIN PROOF
WATER PROOF

Concrete is the logical material for burial vault use because of its properties which resist disintegration to a wonderful degree. When properly made concrete burial vaults are air-tight, indestructible and the best all around material that has ever been found for this purpose. The catacombs of Rome were built of concrete and the wonderful preservative powers of these ancient tombs have aided much in the interpretation of ancient history because of preserving to such a wonderful degree the bodies, utensils and belongings of the ancients. Concrete vaults can be securely sealed up by cementing the lid and will resist all destructive forces of disintegration. Dampness does not corrode concrete as it does iron and when properly made it is perfectly impervious to water. It keeps the ground from sinking.

CONSTRUCTION. "Northwestern" vault moulds are composed of inner shell, outer shell and lid. The outer shell is made in four parts, having two adjustable ends fitted with rounded panel corners giving a very finished and artistic appearance to the mould. The sides and ends are adjustable and are held together by heavy "U" shaped clamps and are made of 14 gauge sheet steel reinforced by angle irons.

Inside Shell is composed of 20 pieces of 14 and 16 gauge sheet steel, which are held together by 2½ in. angle irons which are slotted so that the pieces of sheet steel will slide together making it adjustable to any size.

The **Lid Mould** is made of four cast iron pieces held together by four heavy clamps.

The **Inner Shell** is held the proper distance from the walls of the mould by means of over-head suspension hooks, which keep the inner shell the proper distance from the sides and ends of the outer shell.

All parts of our steel moulds are carefully machined and fitted together so as to work smoothly. The inner and outer shell are adjustable and independent of one another so that the thickness of the wall can be varied. The inner shell is well braced so as to insure rigidity and squareness.

SIZE OF VAULTS. This mould is adjustable to any size from 2ft. to 3ft. wide. 2ft. to 7ft. 4in. long and 2ft. high. The mould can be quickly changed to any size and the moulds made any place. No other moulds or parts are necessary and one complete "Northwestern" Adjustable Burial Vault Mould takes care of all orders for any size and without a cent additional expenditure.

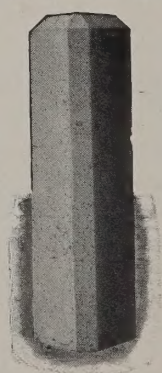
COST OF MAKING CONCRETE VAULTS. The cost of making concrete burial vaults is from $4 to $6. and would sell ordinarily for $35 to $50, placed in the grave. The profits are large and attractive, and offers splendid opportunity for investment. Vaults can be made by any one and in a very short period of time.

WATER TROUGHS AND SUPPLY TANKS

The use of this mould is not necessarily confined to making burial vaults, but is of admirable form and shape for any receptacle such as water troughs, supply tanks, laundry tubs, mangers, feeding troughs in fact anything of a like nature, in size 2 to 3 feet wide, 2 to 7 feet long and 2 feet high, being indestructible and becoming harder and firmer with age, not affected by water or fire, and saving the cost of replacing old and rotted lumber.

"NORTHWESTERN" GRAVE MARKERS

Grave markers command a ready sale everywhere, are easily and quickly made and can be indented at the head with any initial, date or other mark. The cost of making such a marker does not exceed 25 cents and are made in size 6x6x24. This mould comes in two sections perfectly fitted and squared up.



Grave Marker
Price $12

"Northwestern" CONCRETE BLOCK CAR

Any Number of Decks.

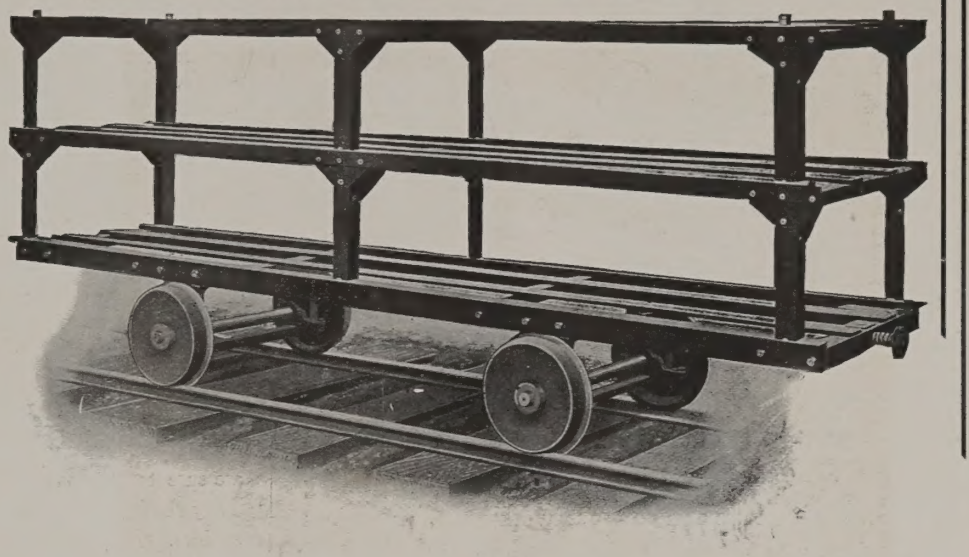
CAPACITY:

Eighteen 12 in. Blocks

Twenty-four 9 in. Blocks

Spring Journal Box

Spring Bumper



The block car is almost as necessary to the block manufacturer as a concrete mixer, especially when the curing shed is located at any distance from the factory building. It is not a difficult matter to figure the saving of one of these cars over handling by hand. It requires the better part of one man's time to remove the blocks from one block machine and store them away. Equipped with a block car, the blocks can be laid on it by the operators as they are removed from the moulds and practically save one man's time for each machine. Heretofore the large expense of such a car made its use prohibitive with the ordinary block maker. We are putting out this car at a price within every one's means not a cheaply gotten up car but very high-grade and costing many times what we offer it for if purchased through the ordinary foundry houses.

CONSTRUCTION. All of the frames are made of two inch angle iron, thoroughly braced and riveted, having triangular shaped braces at the corners. The car has removable decks which fit on very nicely into keys or projections at the corners which hold each frame from slipping and getting out of place. This method also has the advantage of permitting each deck to be loaded before the next deck is put into position.

The center decks are supported by truss rods running the entire length of the car, being bridged under the center cross pieces to prevent sagging when loaded. *We make this car with center standards only on special order.* The axles are made of cold rolled steel. The journals have oil tempered springs which carry the weight of the car and prevent any danger of breaking the soft blocks. The car is equipped with spring bumper to prevent danger of breakage by collision. Specifications: length over bumpers, 7 ft. 7½ inches; width over all, 24½ inches; track guage, 24 inches; distance between decks. 11 inches.

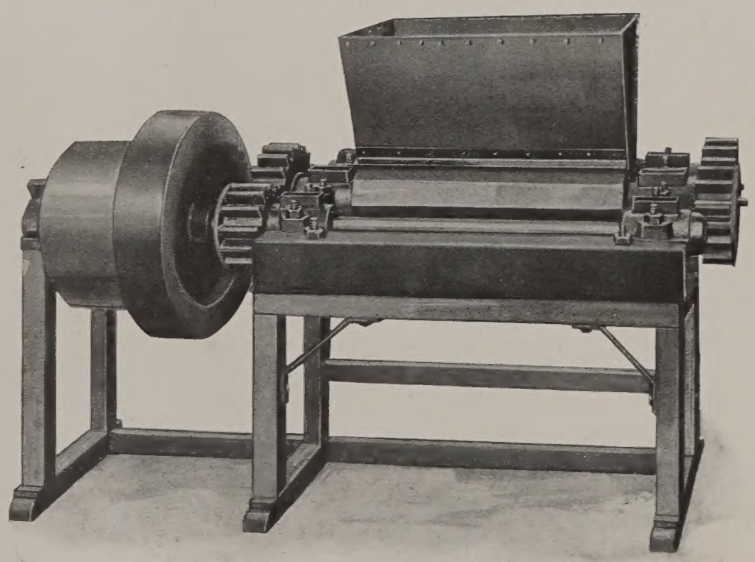
Price complete, one deck without center slats, $20. Separate decks without slats, $3. Prices of Wheels, Axles, Track, Etc., on application.

"Northwestern" POWER CRUSHER

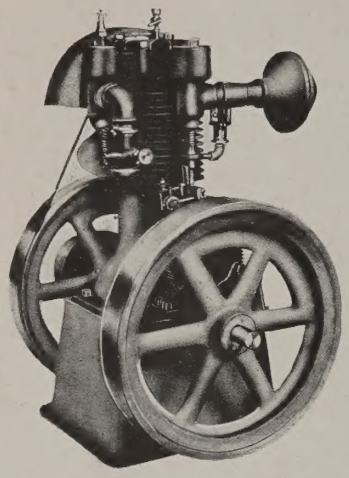
This is a powerful crusher consisting of two currugated cylinders, heavy gears and shaft. The cylinders run in solid boxes fastened on the frame and large oil cups to prevent the bearings from becoming hot. It is largely used for crushing clinkers from furnaces and waste from crockery and sewer pipe factories, broken brick, etc.

This Crusher is invaluable for use in making cinder blocks, — very light and practical blocks for certain purposes. It is a money saver, (when such waste material as mentioned above can be secured) over the use of stone, etc. It is designed for crushing waste materials of weaker texture than stone.

Price $125.00



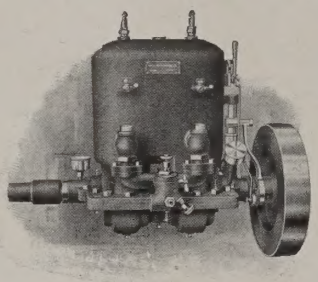
"NORTHWESTERN" ENGINES



WE are large manufacturers of engines in three general styles; *stationary* for grain elevators, creameries, pumping plants, printing office, feed mills, machine shops, pumping water, spraying outfits, farm and contract work; *portable* engines for sawing wood, cutting ensilage, well drilling and for general farm and contract work; *marine* engines for launches, tenders and other water craft.

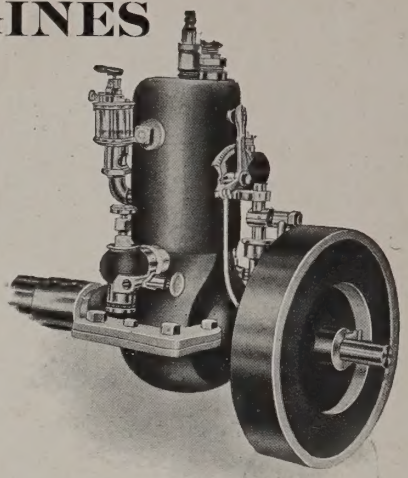
We issue two engine catalogs, one of marine motors and the other of the Stationary and Portable line. Either publication will be mailed to anyone upon application.

Our Stationary and Portable engines to which we wish to particularly call attention are built in three different types: tank cooled, open jacket and air cooled. Each has certain advantages and, as the range of work of a gasoline engine is very wide, each is adapted for different conditions.

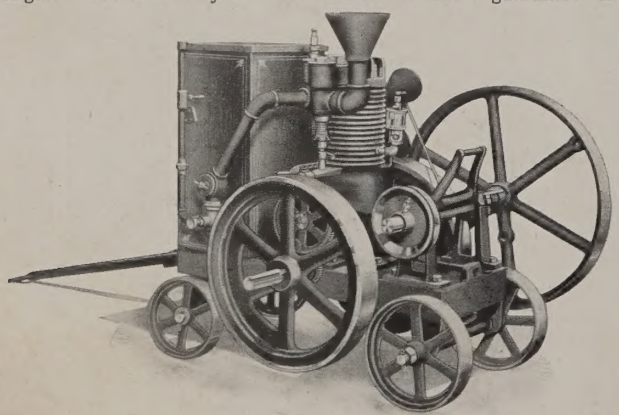


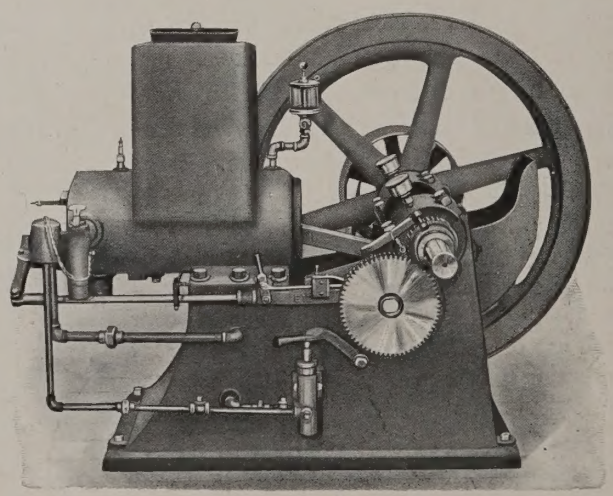
We wish to emphasize the fact that the engines are not a side issue but are a very important part of the Northwestern line and we are prepared to furnish direction and advice free in regard to your engine needs. We have in our employ one of the best experts in the country who will be pleased to answer all questions promptly and freely.

If you will tell us your needs and describe the conditions and work you have to do, we will be pleased to place at your disposal all possible information and all questions will be answered promptly, The Northwestern line of gasoline engines is varied and includes both two and four cycle gasoline engines, water cooled in both the tank cooled type and open jacket, air cooled and includes both vertical and horizontal engines. Each and every engine manufactured by us is sold under the fullest guarantee and should any part break from defect in material or poor workmanship we are willing to replace it free of charge.



Judging from the sales we have made in the past five years in 44 states and foreign countries we have the best engines in the market, and the most satisfactory feature is that where they are once introduced we are sure to sell more. They easily take the lead over more extensively advertised engines. Northwestern engines are well made and durable, well governed, easy starting and will develop more than their rated horse power. In the building and designing we have eliminated several of the troubles in other makes. The area of compression and the size of the exhaust and intakes are absolutely correct. There are points that can only be worked out by those who have skill and training in mechanical engineering and only after long experience is the factory able to get these results. All our engines are designed by one of the best mechanical engineers in the country. All the engines are equipped with jump spark ignition and the time of ignition can be changed the same as on an automobile engine. A "jump spark" will deliver a hotter spark on a smaller current of electricity than a "make and brake" and the batteries will last much longer. A full description of all engines can be had by sending for a copy of our special engine catalog. The prices we are quoting is exceptionally attractive and the engines are strictly high-grade in every respect. We guarantee you good engines, prompt service and general satisfaction. We can save you money and will place all necessary information regarding this line at your disposal.





AVERY LIBRARY
COLUMBIA UNIVERSITY